



**FSC**

Food Secure Canada

**PAYING FOR  
NUTRITION  
A Report on  
Food Costing  
in the North**

PHOTO: Serena LeBlanc

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# KEY FINDINGS



The cost of feeding a family in northern Canada is twice as much as similar expenditures in the south. The average cost of the Revised Northern Food Basket (RNFB) for a family of four for one month in three northern and remote on-reserve communities (Fort Albany, Attawapiskat, and Moose Factory) is \$1,793.40.

On-reserve households in Fort Albany must spend at least 50% of their median monthly income in order to purchase a basic nutritious diet. A reasonable assumption must be made, based on food basket calculations and the older household income data available, that Attawapiskat and Moose Factory must do so as well.

The Nutrition North Canada subsidy program, while important, does not lower the cost of food in northern communities to affordable levels.

Food environments in northern and rural Ontario and rural Nova Scotia cannot be compared directly to each other. Each region has unique food environments and cultural contexts that pose distinct challenges to food security. However, there are opportunities to address unacceptably high food insecurity rates using strategies best suited to local contexts.

Assigning a measurable value to wild food is extremely difficult; the sacred, cultural and community value of traditional foods for Indigenous people is incalculable for past, present, and future generations.

The time to act is now. We call on the federal and provincial governments to make access to nutritionally adequate and culturally appropriate food a basic human right in Canada. This can be done through poverty reduction strategies that are tailored to address local and cultural circumstances and premised on a renewed relationship with First Nations that acknowledges and respects Indigenous sovereignty.





## EXECUTIVE SUMMARY

The hard work of Indigenous<sup>1</sup> grassroots activists has brought a great deal of national and international attention to the food insecurity crisis that exists in many northern, remote, and Indigenous communities in Canada.

This report provides a robust analysis of food costing data in Northern Ontario. The area selected for study, the Mushkegowuk territory (located in northeastern Ontario along the James Bay Coast), is part of Canada's forgotten provincial north. It is difficult to know what the rates of food insecurity are for the provincial norths as no comprehensive study has been undertaken. A discrete 2013 study on Fort Albany First Nation in Northern Ontario reported household food insecurity rates of 70%.<sup>2</sup>

One of the major factors contributing to food insecurity in northern First Nations populations is the elevated cost and affordability of food, whether due to increasing dependence on the market (imported) food system and/or the rising costs of participating in land and water based food-harvesting activities. Many First Nation on-reserve communities located in the provincial Norths are accessible only by plane

or sea barge and briefly by seasonal winter ice roads.

The retail cost of food is often prohibitively high, food selection and quality is limited, and communities are usually serviced by only one grocery store. Moreover, very few northern and remote communities have consistent access to the public services that are more common in southern and urban places in Canada that benefit the entire population.

We used food costing<sup>3</sup> as a tool to examine the cost of healthy eating as well as to advance discussions on the affordability of a nutritious diet in on-reserve and rural communities. The rural and northern on-reserve context presents particular challenges regarding the collection of retail food costs. While the Revised Northern Food Basket (RNFB) is designed to provide a more complete picture of the cost of a basic nutritious food basket in northern regions, the National Nutritious Food Basket (NNFB) is often used as the food costing instrument in provincial food costing research. With reserves falling under federal jurisdiction and health remaining a provincial responsibility, this data is not collected by the federal government for on-reserve communities.



Moreover, many believe that the RNFB does not adequately reflect the realities of Northern Canada. To date, no comprehensive data exists on the cost of accessing a healthy diet in the retail food environment for rural and northern on-reserve Indigenous households. This project examined the cost of the RNFB in five northern communities to illustrate the impact of these costs compared to local household incomes. Guided by methodologies of participatory

action and collaborative research that are part of the participatory food costing model<sup>4</sup> developed by the Food Action Research Centre (FoodARC) and its partners, this report offers lessons learned on methods for food costing in the provincial Norths. In order to undertake these objectives, we drew on the broad expertise of a Research Advisory Committee (RAC) and Community of Practice (CoP) to guide our methodology.



PHOTO: Serena LeBlanc





# PROJECT HISTORY & GOALS

The Paying for Nutrition project is a community/academic partnership between Food Secure Canada and four universities: the Food Action Research Centre (FoodARC) at Mount Saint Vincent University in Halifax, NS; the Faculty of Health Professions, Dalhousie University in Halifax; the Department of Indigenous Learning at Lakehead University in Thunder Bay, ON; and the School of Public Health and Health Systems at the University of Waterloo in Waterloo. The project was funded between 2014 and March 2016 by a grant awarded from Industry Canada.

Food Secure Canada (FSC) is an alliance of organizations and individuals working together to advance food security and food sovereignty through three goals: zero hunger, healthy and safe food, and sustainable food systems. FSC convened the Northern and Remote Food Network in 2010 to share information and develop collective projects that can impact policy and affect food security and food sovereignty in northern and remote communities.

The network and its members identify food costing research as a priority in order to support their work locally, regionally, and nationally.

The broad goals of the project are to:

**Develop guidelines that standardize the nutritious food basket methodology in the North and explore the potential of comparing data across regions.**

**Study the affordability of the nutritious food basket (relative to various income scenarios and the cost of living) in northern Canada.**

**Strengthen the work of the Northern and Remote Food Network and support its advocacy efforts by establishing a Community of Practice on food costing in the North and producing a report on the cost of food in the North.**

**Apply and promote participatory food costing methods where feasible.**

This report includes commentary on how these goals were met, describes the challenges that were faced in conducting food costing in northern and remote locations, and discusses the limitations of creating a standardized food costing tool to serve all northern communities. It also discusses the challenges of comparing food costs between regions and the importance of community participation at all stages of the research. The report is accompanied by a methodology guide that is intended to help others conduct food costing research in other Indigenous, on-reserve, and northern communities.

## Understanding Food Security and Other Definitions

**FOOD SECURITY** is defined as the “assurance that all people at all times have both the physical and economic access to the food they need for an active, healthy life. The food itself is safe, nutritionally adequate, culturally appropriate and is obtained in a way that upholds basic human dignity.”<sup>5</sup> Food insecurity refers to the inability to access adequate food, based on a lack of financial and other material resources. It is a household, not individual, situation. A lack of access to grocery stores, living in a “food desert,” or not having the time to shop/cook are not the same as food insecurity, though they contribute to food insecurity.<sup>6</sup>

**FOOD SOVEREIGNTY** is a concept that arose in response to the inability of a food security analysis to address relationships of power embedded within larger economic systems. Food sovereignty is “broadly defined as the right of nations and peoples to control their own food systems, including their own markets, production modes, food cultures and environments, emerging as a critical alternative to the dominant neo-liberal models for agriculture and trade.”<sup>7</sup>

**INDIGENOUS FOOD SOVEREIGNTY** is based on the responsibility that Indigenous peoples and communities have to “uphold our distinct cultures and relationships to the land and food systems. Indigenous food sovereignty describes, rather than defines, present-day strategies that enable and support the ability of communities to sustain traditional hunting, fishing, gathering, farming and distribution practices” as have been done for thousands of years prior to contact with European settlers.<sup>8</sup>

**FOODS FROM THE LAND** are forest and water foods that are hunted, fished or gathered. These foods may “grow wild” but are also “managed” or “stewarded,” and their place within the ecosystem is understood by the people who live with and depend upon them. Foods from the land are referred to as traditional foods, forest and freshwater foods, wild food, and country food.





## Food Insecurity in First Nations Communities

According to the 2016 report by PROOF, 25.7% of off-reserve Indigenous households experience food insecurity compared to 12.0% across all Canadian households.<sup>9</sup> Issues affecting the food security of Indigenous people are further complicated by the long histories of dispossession and colonialism. The settlement of First Nations on reserves by the federal government was done without attention to access to hunting territories, building materials, medicines, or clean water. Historian Mary-Ellen Kelm notes that governments were well aware that “the laying out of reserves constrained the ability of the Indigenous peoples to provide themselves with traditional foods.”<sup>10</sup>

Government policies have limited and undermined Indigenous people’s ability to pursue land-based harvesting practices. For example, provincial hunting laws make it illegal to hunt certain animals; prevent Indigenous peoples from hunting during specific seasons; and create bag limits (restrictions on the number of animals that hunters may kill and keep).<sup>11</sup>

Under Canada’s Residential school system thousands of children were separated from their families and confined to schools designed for assimilation. The negative impact of this on the intergenerational transmission of knowledge cannot be underestimated.<sup>12</sup>

The harvesting, preparation, and consumption of traditional foods is deeply embedded in the familial, cultural, and social fabric of Indigenous communities and is essential to both social and physical well-being.<sup>13</sup> As well, human-induced climate change has altered animal migration patterns and reduced the ability of Indigenous peoples to hunt and fish on their traditional territories.<sup>14</sup>

Addressing these issues, the Declaration of Atitlán, drafted at the First Indigenous Peoples’ Global Consultation on the Right to Food, states that the “denial of the right to food for Indigenous peoples is a denial of their collective Indigenous existence, not only denying their physical survival, but also their social organization, cultures, traditions, languages, spirituality, sovereignty, and total identity.”<sup>15</sup>



## Consequences of Food Insecurity

Food insecurity causes cumulative physical, social, and psychological problems in both children and adults.<sup>16</sup> In North America, chronic food insecurity has been associated, paradoxically, with obesity, especially in women and girls.<sup>17</sup> In infants and toddlers, food insecurity is correlated with higher hospitalization rates and generally poor health, and can adversely affect infant growth and development.<sup>18</sup> In older children, food insecurity negatively affects academic performance and social skills. Food insecurity has an emotional impact.

In Canada it has been shown to lead to a greater likelihood of conditions such as depression and asthma in adolescence and early adulthood.<sup>19</sup> Adults in food insecure households have poorer physical and mental health and higher rates of numerous chronic conditions, including depression, diabetes, and heart disease, and much higher health care costs.<sup>20</sup> Because health and well-being are tightly linked to household food security, food insecurity is a serious public health issue.<sup>21</sup>



PHOTO: Serena LeBlanc





## Northern Retail Food Environment

Given barriers to accessing traditional foods, many northern First Nations communities must rely on grocery stores that are often not locally owned and that carry foods at much higher costs than in Southern communities. Many factors contribute to the higher prices of retail food, including:

**Smaller populations with low purchasing power.**

**Many communities have only one grocery store carrying fresh, perishable items. Often this store is part of a chain that holds a virtual monopoly in the region.**

**Higher transportation and fuel costs.**

**Higher heating, cooling, lighting, and building maintenance expenses.**

**Complex food distribution systems with longer, less frequently traveled transportation routes.**

**Maximum capacity for weight and mass on airplanes limits volume purchases.**

**Greater risk of damage or loss to perishables during the long transport.**

**Unreliable availability of foods due to weather and unforeseen circumstances.**

For First Nation communities that are only accessible by plane or winter ice roads, their food environments are unique. These communities generally rely on two co-existing food systems to sustain themselves: the land-based forest and freshwater food harvesting system and the market-based retail food purchasing system.

Typically, remote communities only have one major retailer that provides most goods and services in the community (food, gas, pharmacy, financial services, fast food, and increasingly health care services, etc.). In many instances, rural First Nations that have year-round road access do not have a grocery store in their community and are forced to travel significant distances to acquire food and other necessary goods and services.

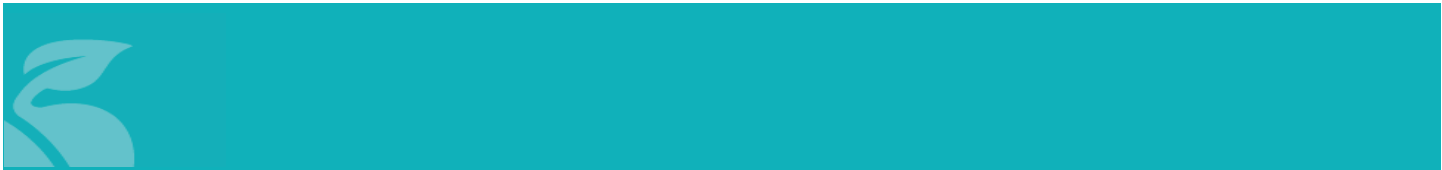


## Food Costing

While high food costs are not the only factor impacting food security in the rural and provincial Norths, they play a critical role. Food costing allows us to examine the cost of a basic, nutritious diet for households of different sizes and compositions. By considering the cost of purchasing food in relation to the cost of other basic household expenses and income, we gain a better understanding of how much of the household income (at minimum) would need to be spent on food to eat a healthy diet, and whether this is affordable. This information can be used to identify vulnerable population groups and address the adequacy of federal and provincial income and support policies.

In Nova Scotia, Participatory Food Costing has worked with individuals with experience of food insecurity who live in the communities and shop at the stores to collect data, interpret the results, and share

the research findings with others.<sup>22</sup> Collecting this information empowers individuals, communities, and relevant stakeholders to advocate for adequate income and income supports and, in some cases, lower prices. Findings from food costing can be shared on many levels to effect change – the grocery store, community leaders, champions within public health and social services/systems, national businesses, and politicians. Food costing research can help us to more accurately describe and understand the realities of people who face food insecurity due to inadequate income, as well as to map out various policy options for making a healthy diet more affordable and accessible for everyone.<sup>23</sup> Finally, the numbers, particularly when they have been generated through participatory research, tend to be more persuasive for policy makers.



## What are the National Nutritious Food Basket (NNFB) and the Revised Northern Food Basket (RNFB)?

Agriculture and Agri-Food Canada first began monitoring food costs in 1974 through the creation of the Thrifty Nutritious Food Basket, which later became the National Nutritious Food Basket (NNFB).

These baskets were created as survey instruments to measure the cost of a basic diet that met current nutrition recommendations and reflected average consumer purchasing patterns. The current NNFB, updated by Health Canada in 2008 to reflect more current dietary recommendations and consumption patterns based on the 2004 Canadian Community Health Survey (Nutrition Module) (Health Canada, 2009), lists 67 standardized food items and their purchase size.<sup>24</sup> The Revised Northern Food Basket (RNFB) is a survey tool created by Indigenous and Northern Affairs Canada, in consultation with Health Canada, to monitor the cost of food in remote northern communities. The RNFB is also based on average overall consumption for a sample population and contains 67 items (as revised in 2008) and their purchase sizes.

The RNFB and NNFB are standard tools accepted by statisticians and governments to monitor the price of food in the North. Because of this, northern grocery stores are more likely to stock these items.

The RNFB and NNFB may represent a basic nutritious diet, but they are not meant to stand in for a weekly shopping list or household budgeting tool. The costing baskets serve as one way to estimate something that is very complex. Actual households might not purchase these specific foods or the quantities described each week, and the baskets do not reflect the food preferences of individual households and communities. Both tools presume some ability to prepare meals from basic ingredients and do not list pre-prepared packaged meals, snacks, organic or locally sourced foods, or include the costs of eating out.





## What is the Nutrition North Canada (NNC) Program and Subsidy?

In April 2011, the Canadian federal government replaced the longstanding Food Mail Program (which operated as a transportation subsidy through Canada Post) with Nutrition North Canada (NNC), a retail-based program to subsidize the high cost of perishable, nutritious foods in the North. Retailers must apply to the government to become suppliers and, if accepted, they must sign contribution agreements to receive a subsidy on certain foods that are flown into eligible northern communities and may be subject to compliance reviews. Registered retailers receive the subsidy directly and are responsible for passing along the full savings to their customers by decreasing the retail cost of each item by the full subsidy amount they receive. They are also responsible for self-reporting their prices to the program administrators.<sup>25</sup>

The subsidy, based on store location and weight, is applied to two levels of perishable and nutritious foods. As explained on the NNC website: “retail subsidies are applied against the total cost of an eligible product (including product purchasing cost, transportation, insurance and overhead) shipped by air to an eligible community. The higher subsidy is reserved for select

items that Health Canada has identified as “the most nutritious, perishable foods such as milk, eggs, meat, cheese, vegetables and fruit.”<sup>26</sup> A list of the food groups that receive the subsidy is available at Nutrition North Canada ([www.nutritionnorthcanada.gc.ca/en/g/1369225884611/1369226905551](http://www.nutritionnorthcanada.gc.ca/en/g/1369225884611/1369226905551)).

The subsidy is calculated using this formula:

$$\text{subsidy level (\$/kg)} \times \text{weight of eligible item (kg)} \\ = \$ \text{ subsidy payment.}^{27}$$

The amount must be clearly indicated on price tags in-store, and as of April 1, 2016, must also be visible on grocery receipts.

There are 32 remote reserves in Northern Ontario. This is more than any other region in Canada, yet only eight are eligible for the full NNC subsidy.<sup>28</sup> Another seven receive a partial subsidy (\$0.05 a kilogram) while the other 17 communities are not eligible for any subsidy.



The program came under serious criticism in the 2014 Auditor General’s Report, which found that the government could not verify whether the subsidy savings were being passed onto consumers in full, nor whether community eligibility was based on need.<sup>29</sup> According to the program website, these issues and others are currently being addressed. The federal government recently announced that as of October 1, 2016, thirty-seven additional isolated northern communities will receive the NNC subsidy.



PHOTO: Timmins Airport, by P199, Wikimedia Commons



## The Communities Sampled

The Mushkegowuk territories (in northeastern Ontario along the James Bay Coast) are considered part of Canada's forgotten provincial North.<sup>30</sup> While the provincial Norths tend to have more in common with the far North than the urban south, they receive less per capita government funding.

The three reserves or First Nations in which the food costing was conducted were Moose Factory, Fort Albany, and Attawapiskat. Two municipalities were also included, Timmins and Moosonee, each with a substantial "coastal" population that serves as a service point for the Mushkegowuk communities.

Timmins, a major city in Northern Ontario, is located on the highway system and is a gateway for flights between the south and the communities further north. Of the four communities along the James Bay coast, Moosonee is accessible by train year-round and, in winter, is accessible further north via the seasonal ice road. It is a gateway for flights up the coast. Moose Factory First Nation can be accessed from Moosonee by boat or by the winter ice road (going north to the remote regions and south to the highway system).

Throughout the long months of winter freeze-up and spring break-up it is only accessible by helicopter. The other two remote reserves, Fort Albany and Attawapiskat, have limited access and can be reached only by plane throughout the year and by seasonal winter ice roads.

Moosonee, Fort Albany, and Attawapiskat have one full-service grocery store each, run by the Northwest Company. Moose Factory also has an independently owned retailer with a full range of food items. Three stores in Timmins were sampled for their popularity, prices or range of items, and proximity to the airport.

The remote First Nations sampled in this project, Fort Albany and Attawapiskat, are two of the eight First Nations communities in Northern Ontario that are fully eligible for the federal NNC subsidy at \$1.30 or \$1.40 per kilogram, respectively. They also receive a \$0.05 per kilogram subsidy for a select list of foods considered to be less nutritious.





## Community of Practice on Food Costing in Northern and Remote Communities

FSC formed a Community of Practice (CoP) in August 2014 that participated in monthly teleconference discussions on some of the key challenges of developing a standardized northern methodology for food costing.

The CoP was comprised of northern food activists undertaking local efforts related to food costing; service providers in northern communities; professionals working in health and educational institutions, government, non-governmental organizations; and academics. Over fifty individuals signed up to receive information on the meetings, while each

teleconference averaged 12-15 participants. The CoP strengthened the work of FSC's Northern and Remote Food Network as participants engaged in exploring issues of retail food costing within the context of northern food security.

With the CoP's contributions, our research team decided which data we could collect and how the data would be analyzed. We also used these discussions to inform the development of a northern food costing methodology guide.<sup>31</sup>



PHOTO: Serena LeBlanc



## What to cost? Which food basket tool to use?

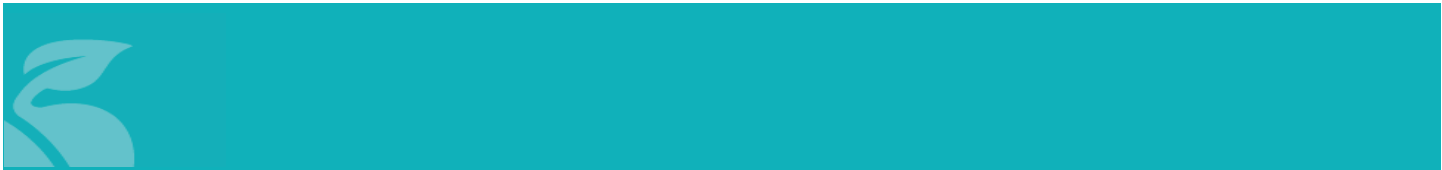
In addition to FoodARC's participatory food costing model, the CoP looked at other food costing projects completed or in progress in the North. We discussed the limitations and the applicability of using any one methodology across northern Canada. For example, we weighed the participatory advantage of designing a new list containing items that reflected individual community purchasing preferences versus the analytical benefit of using a standardized food basket across the North.

We settled on an expanded version of the RNFB, assuming that most items would be stocked in full-serve grocery stores. Because the RNFB is widely used, it allows for a comparison of food costing data collected over time and in studies carried out across the North under the previous Food Mail program, by INAC and various academic and non-profit organizations.

## Comparing the RNFB and the NNFB and Comparing Northern and Southern Canada

One of the questions faced by the Paying for Nutrition team was whether it was appropriate to compare the costs of a nutritious diet between north and south. Although each food basket is accepted as the standard tool within its own context, the items contained in the two baskets differ in content and in freshness. The RNFB contains more meat, non-perishable foods, and processed foods and fewer fresh fruit and vegetables.<sup>32</sup> Neither basket considers the costs of land or water-based food acquisition, and both assume that the

items in the basket are accessed solely through the retail food environment, and in only one full-service grocery store. In consultation with our Research Advisory Team, we decided to cost an additional number of basic items. Working with the CoP, we chose 10 common “staple” items listed in both the RNFB and NNFB, plus an additional two items that are considered staples in many northern First Nations households (Klik® and lard). We also assessed these 12 items for quality.



## Quality Assessment

Food quality continues to be a concern in rural and northern communities where selection and choice is limited, transportation routes are long, and availability is unreliable.<sup>33</sup> Fresh foods like fruits and vegetables are sometimes packaged such that it is impossible to assess their quality prior to purchase. Anecdotal complaints include foods sold past their best before dates, foods showing visible signs of deterioration, frozen foods having been thawed and re-frozen, and damaged packaging.

Fear of purchasing poor quality food leads to buying items whose quality cannot be guaranteed. Such foods tend to be more processed, of poorer nutrient quality, and of higher caloric value. Consumers have noted that when they purchase expensive food that is inedible, they are often unable to return these

items. Fears about quality also limit the food choices that people can or are willing to make on a limited budget. Studies have shown that people are reluctant to experiment with new and different foods because they are worried about waste if the food is going to be rejected by members of the household (like children or individuals with dietary restrictions).<sup>34</sup>

To address these issues, the food quality of a select list of 12 common food items was assessed according to a four-point scale that included packaging, labeling, temperature, and freshness. These categories were described in the Food Mail Interim Review Report (See Methodology Guide to Food Costing in the North, Appendix A).

### The list of 12 foods assessed for quality were:

Fresh Milk, 2%, 2 L  
Ground beef, lean, fresh or frozen, 1 kg  
Banana, 1 kg  
Apples, bagged, 3 lbs  
Potatoes, bagged, 10 lbs

Frozen mixed veggies (carrots, peas), 750 g or 1 kg  
Whole wheat bread, 660 or 675 g  
Eggs, large, grade A, 1 dozen  
Canned beans with pork, 398 ml

Margarine, non-hydrogenated, 907g  
Klik (or equivalent, Spam or Corned Beef) 340 g  
Lard, 454 g





## Food Availability and Substitutions for the RNFB

While no comprehensive study on the frequency with which certain foods are *unavailable* in rural and northern on-reserve grocery stores has been undertaken, anecdotal accounts tell us that fresh milk, meat, produce, eggs, and bread can frequently remain out of stock for days, even months. For example, in 2014 the project coordinator recalls that Fort Albany went more than 2 months without receiving fresh meat at the grocery store. While families have to make do without those items, or make personal choices

regarding what to substitute for the missing items, this is a difficult issue to fully capture in the food costing methodology. Where possible, we recorded when items were out of stock. We found that each of the stores had between four and eight food items that were regularly unavailable for purchase. However, this may differ according to seasonal availability and weather-related eventualities; thus, one-time costing does not accurately capture the unpredictability of which foods are available or when.

## Hunting, Fishing, and Harvesting

A particularly difficult challenge in examining the cost of a nutritious diet in the North is how to factor in the cost of traditional foods. Traditional foods are a common part of many First Nations people's diets, and retail food costing does not provide a complete picture of the procurement and consumption of land- and water-based foods. Traditional food systems place value on spiritual connections and relationships, nourishment, and physical well-being, as well as a

sense of purpose and place that are immeasurable in a monetary sense. Some studies have tried to estimate the cost of hunting; for instance, a 2009 study that examined the detailed logs of active harvesters in Wapekeka and Kasabonika First Nations estimated the annual cost of hunting at approximately \$25,000, with the average hidden cost of harvested meat at \$14 per kilogram.<sup>35</sup>



The CoP discussed past and current studies that attempted to determine the cost of traditional foods but ultimately decided that adopting these approaches was beyond the scope of this project. We decided to collect prices for five hunting and fishing items that might be regularly purchased

for harvesting activities: snare wire, gasoline, ammunition, fishing line, and a fishing net. We did so in order to illustrate, to a small degree, some of the associated retail costs that are frequently overlooked in relation to harvesting activities.

## Data Collection

Five community costers, including the project coordinator, were trained in participatory food costing using FoodARC's training manual<sup>36</sup> adapted for the RNFB and food costing in the North. The costers conducted sample costings of the RNFB in two communities during the winter, when travel was possible on the ice roads. Feedback from this costing went into the project's Methodology Guide to Food Costing in the North (Appendix A). Subsequent training sessions were held for new community food costers using this guide and in consultation with the project coordinator.

Some of the costers felt uncomfortable conducting their research at the only grocery store in their community. As a result, we offered costers two methods: in-store and take-home. The in-store method involved asking permission from the manager to conduct the food costing. The take-home method required costers to purchase the items in the RNFB and to record the prices based on the receipt, not what was listed on the shelf. Money was provided for costers to purchase the RNFB. Both methods were used. Costers made their own decision about which method best suited them.



The food costers, excluding the project coordinator, were paid for the time it took to collect prices and submit the forms. For the quality assessment of the 12 selected items, funds were provided to the food costers so that the items could be purchased and assessed for quality at home.

Paying for Nutrition’s food costing in some communities took place in the last two weeks of June 2015. These prices do not accurately reflect the enormous variations that occur in the price of food and essential goods throughout the year.



PHOTO: Serena LeBlanc



## Cost of the RNFB

The cost of the RNFB for a family of four<sup>37</sup> for one month in each community is:

Attawapiskat	Fort Albany	Moose Factory	Moosonee	Timmins
\$1,909.01*	\$1,831.76*	\$1,639.42	\$1,560.53	\$1,056.35**

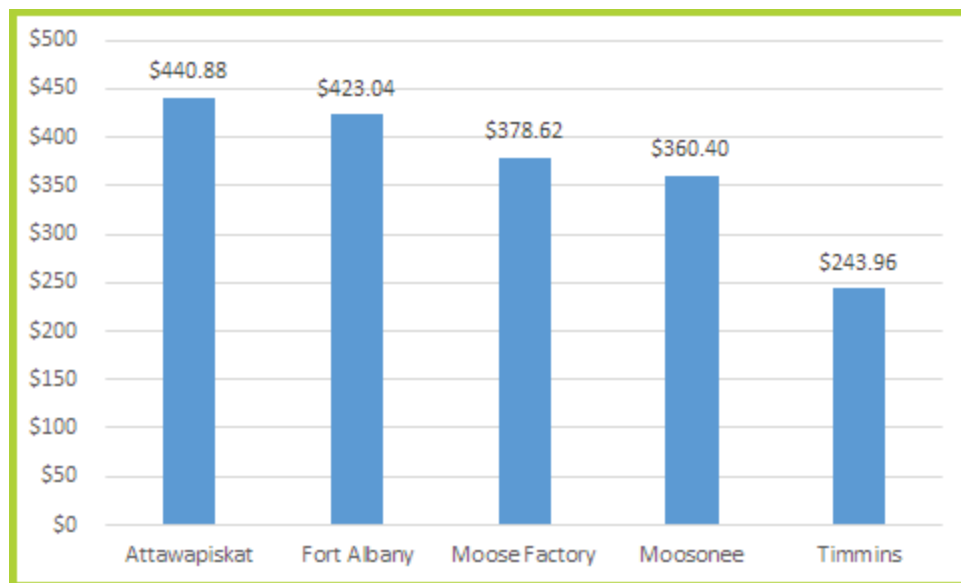
\* Prices for Fort Albany and Attawapiskat include food costs after the full NNC subsidy has been applied to the items; therefore, this is the subsidized price.

\*\* Average of three stores.

## What does a basic nutritious diet cost?

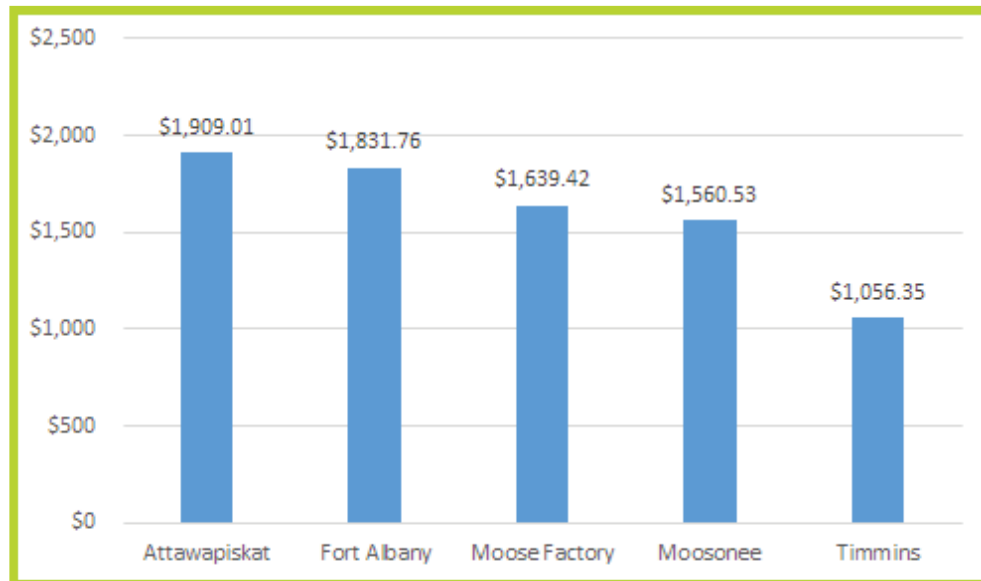
The average monthly cost of the RNFB for a family of four in the three on-reserve communities is \$1,793.40, compared with \$1,560.53 in Moosonee and \$1,056.35 in Timmins.<sup>38</sup>

## Weekly Cost of the Revised Northern Food Basket for a Family of Four<sup>39</sup>





## Monthly Cost of the Revised Northern Food Basket for a Family of Four<sup>40</sup>



## The Cost of Additional Household Items

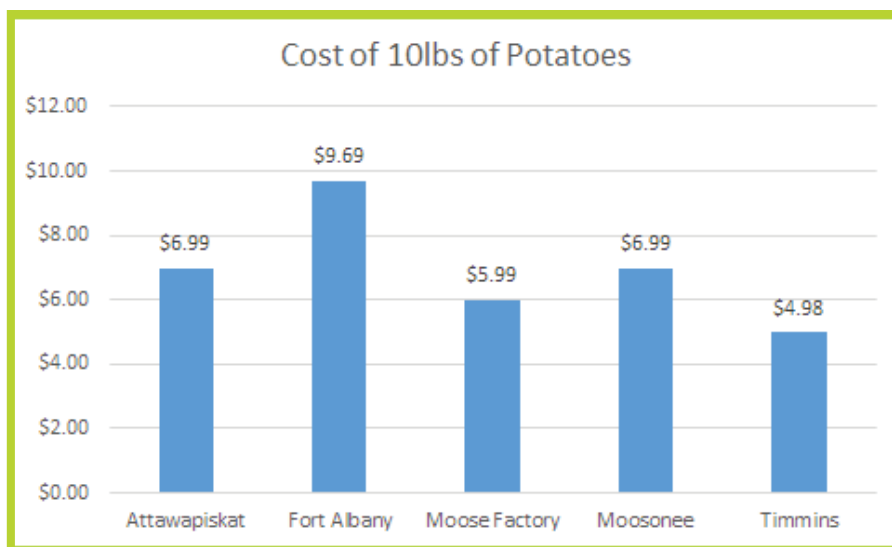
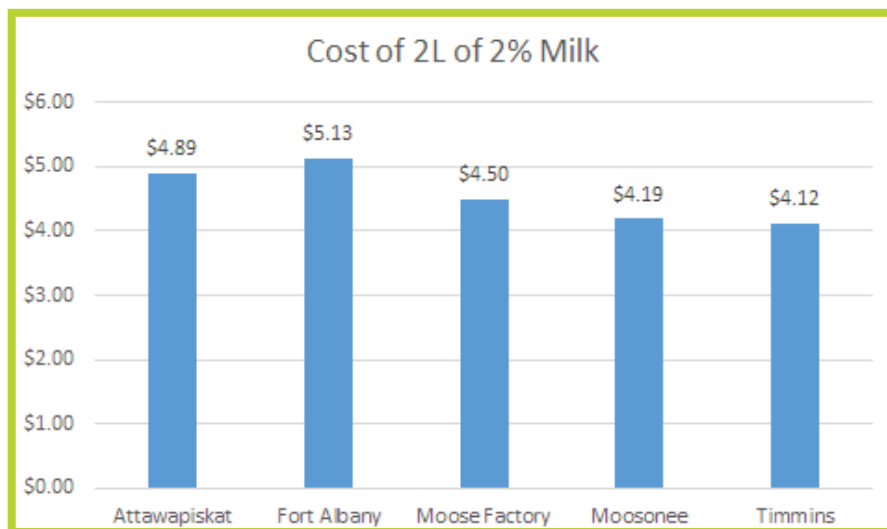
ITEM	PREFERRED SIZE	ATTAWA-PISKAT	FORT ALBANY	MOOSE FACTORY	MOOSONEE	TIMMINS*
Water, bottled	375 ml	\$2.49 (591 ml)	\$2.59 (591 ml)	\$1.00 (500 ml)	\$0.99 (355 ml)	\$1.69 (391 ml)
Toilet paper, 2 ply	8 rolls	\$7.00	\$13.99 (12 rolls)	\$6.39	\$7.79	\$4.52
Diapers, Pampers, size 4	box of 76	\$37.89 (box of 44)	\$33.69 (box of 52)	\$35.99 (box of 48)	\$32.19	\$21.48
Feminine sanitary pads	package of 20	\$7.59	\$7.79 (pkg of 24)	\$8.29 (pkg of 24)	\$5.15	\$3.22 (pkg of 24)
Toothpaste	100 ml	\$6.39	\$6.35 (130 ml)	\$3.99 (130 ml)	\$2.89	\$1.59

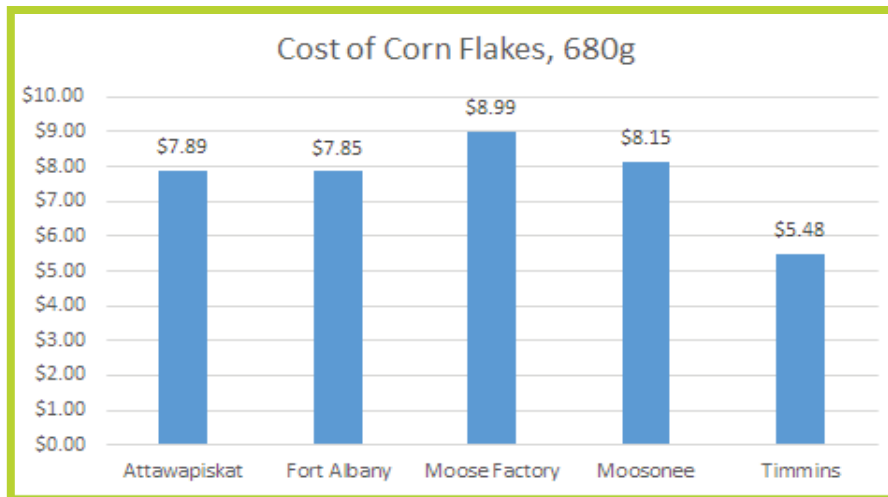
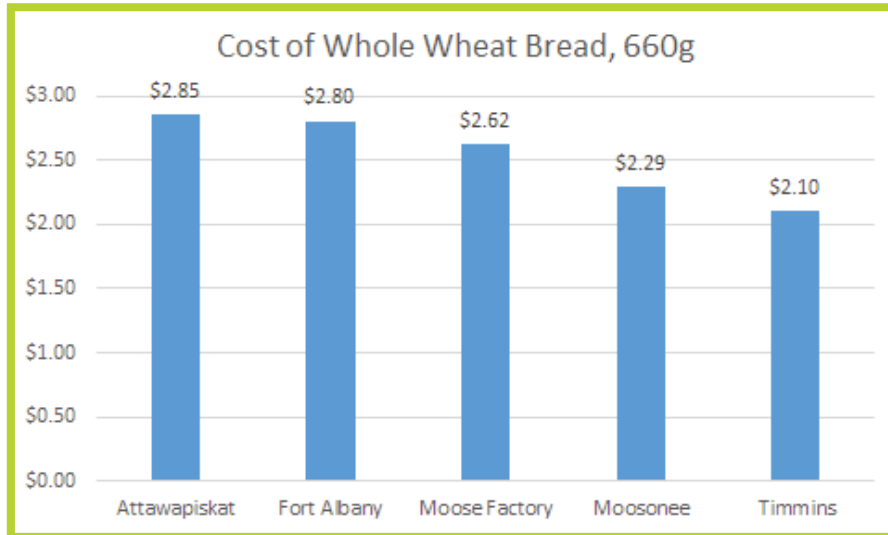
\*Average of three stores. If there were different package sizes recorded between the 3 stores, the two stores with the same package size were averaged for each item.



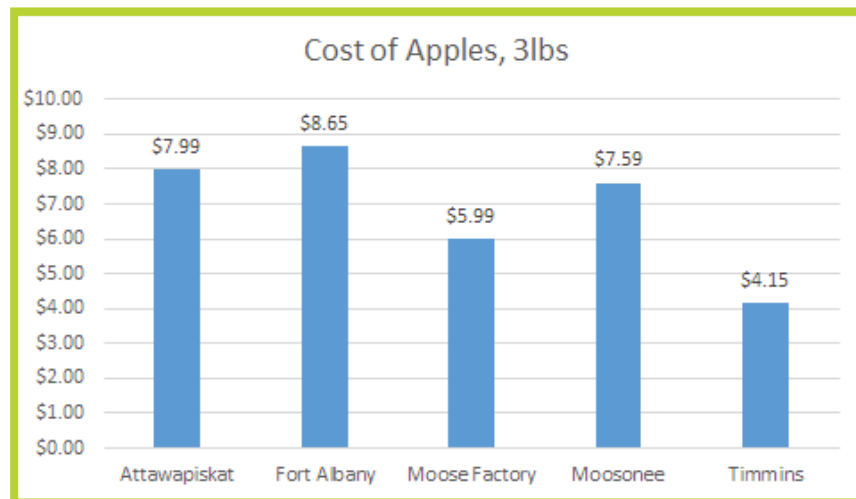
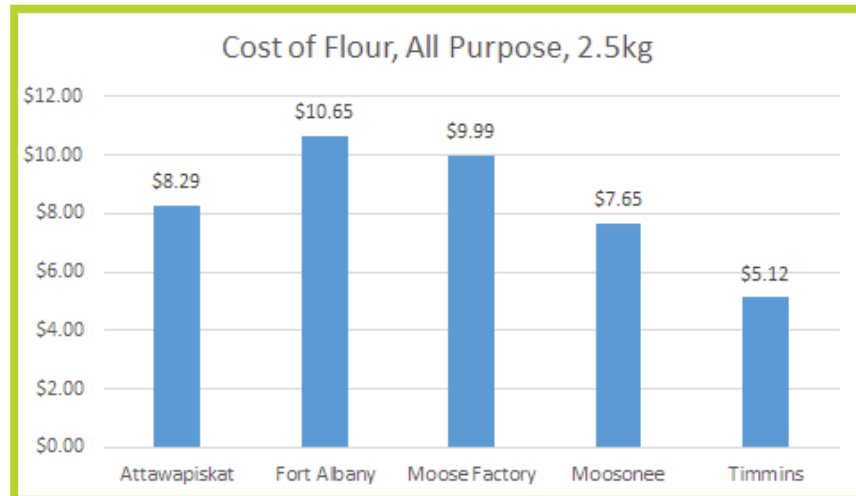
## The Cost of Common Food Items in the RNFB

The data are presented to illustrate the cost of an item on grocery shelves or grocery bills of some common food items from the RNFB. We have included similar bar graphs for the following food items: 2L of 2% milk, 10lbs of potatoes, 2.5kgs of all purpose flour, 3lbs of apples, Corn Flakes, lean ground beef, and a loaf of whole wheat bread.









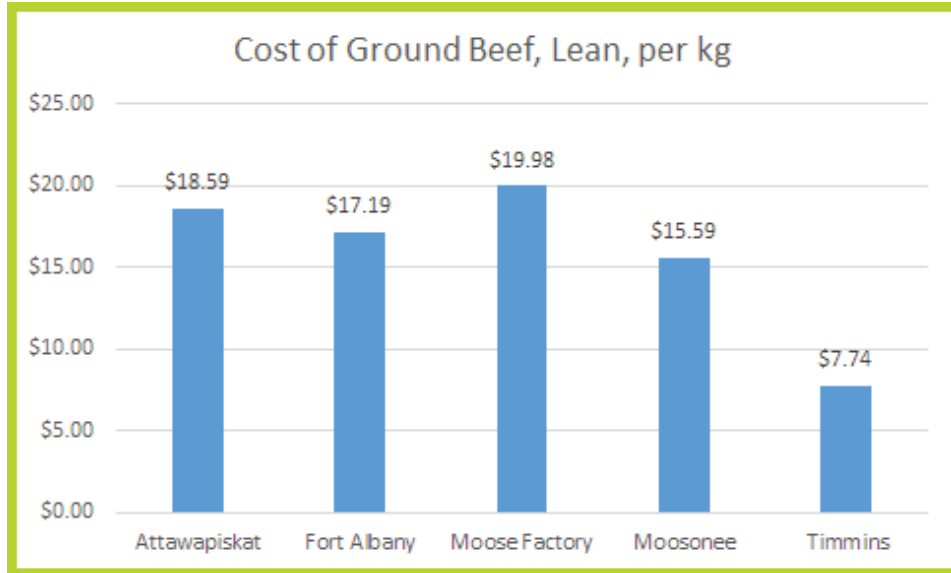
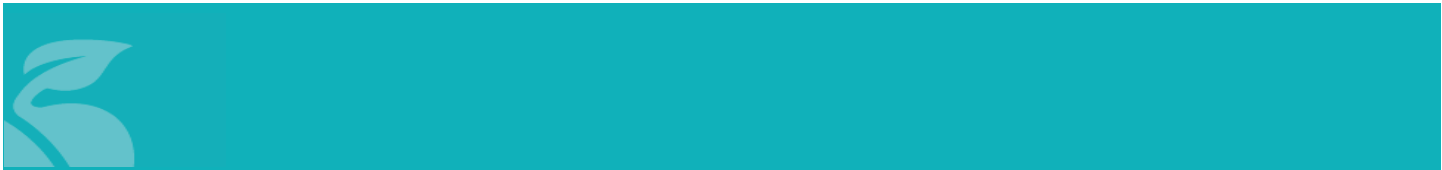


PHOTO: Northern Store, Moosonee, by PI99, Wikimedia Commons



## Quality Assessment

Interestingly, the quality assessment for the 12 items was generally positive. This belied expectations and common perceptions of northern residents that the foods they selected were of inferior quality. It did, however, lead us to re-think the categories and methods of assessing quality in order to more accurately capture this perception.

Several of the participants expressed difficulty in assigning the values and believed that they were too subjective. This may also have been related to the time of the year in which food costing was occurring (June), as travel into these areas during the summer is generally more reliable.

## Items from the RNFB that were Unavailable in the Northern On-Reserve Stores

Each of the northern stores had at least four common food items that were unavailable for purchase. The prices for these items, therefore, had to be imputed (see Appendix B). Chicken drumsticks, cabbage, turnips, and frozen broccoli were not available in two of the three remote northern stores. Frozen carrots were not available in any of the remote northern stores.

Other items that were unavailable in select stores included T-bone steak, frozen apple juice, frozen orange juice, frozen corn, frozen mixed vegetables, skim milk powder, and canned carrots. We were unable to ascertain when these items would be restocked.



## Cost of Hunting/Fishing Items

ITEM	SIZE	ATTAWA-PISKAT	FORT ALBANY	MOOSE FACTORY	MOOSONEE	TIMMINS WALMART	AVERAGE COST
Gasoline	1 L	\$2.85	\$1.75	\$1.49	n/a	n/a	\$2.30
Snare wire, 20 gauge, brass	20 ft	\$3.69	\$2.69	\$2.99	n/a	n/a	\$3.12
Fishing net (gill net)	100 ft	n/a	n/a	\$199.99	n/a	n/a	\$199.99
Fishing line, 50 lb, strength	120 yards	\$0.96	\$7.99	\$5.99	n/a	\$17.58	\$8.13
Shotgun ammunition, 12 gauge	25 cartridges	\$16.99	\$24.99	\$18.99	n/a	\$8.29	\$14.76

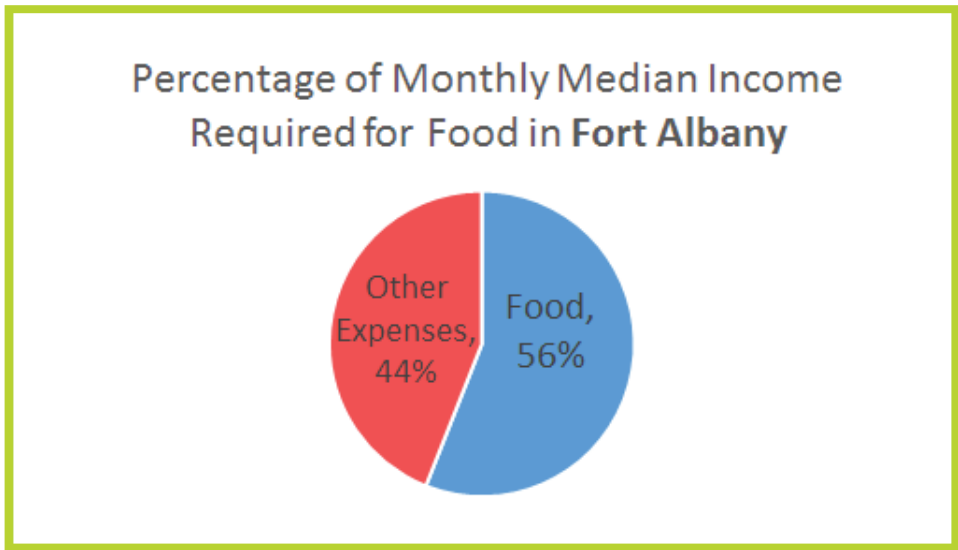
## Median and Average Incomes for Communities in this Study<sup>41</sup>

INCOME	ATTAWA-PISKAT	FORT ALBANY	MOOSE FACTORY	MOOSONEE	TIMMINS	ONTARIO
Median household income	current data not available	\$39,053	current data not available	\$52,376	\$65,461	\$73,290
Average household income	current data not available	\$57,223	current data not available	\$71,854	\$84,435	current data not available



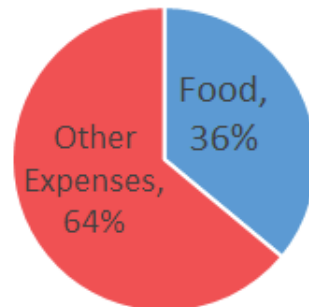


As part of this project, we aimed to examine the price of food in relation to the overall cost of living on remote First Nations reserves located in the provincial North. In order to purchase the items in the RNFB each week (\$423.04) for a month ( $\$423.04 \times 4.33 \text{ weeks} = \$1831.75$ ), Fort Albany households would have to spend more than 50% of their monthly median income ( $\$39053/12 \text{ months} = \$3254.42$ ;  $\$1831.75/\$3254.42=0.56 \times 100=56\%$ ). This is likely also the case in Moose Factory and Attawapiskat, although current income data are not available.





### Percentage of Monthly Median Income Required for Food in **Moosonee**



### Percentage of Monthly Median Income Required for Food in **Timmins**



## Discussion

Access to affordable and nutritious food has been recognized as a basic human right in Canada.<sup>42</sup> On-reserve households, especially in the provincial and far Norths, are experiencing a crisis in food security. Paying for Nutrition represents the first time that food costing data have been collected from the Mushkegowuk Territories in a comprehensive manner. However, rather than viewing this work as complete, we see it is an important first step in identifying and addressing the root causes of food security among northern Indigenous peoples.

What these data do tell us is that of the five communities in which we conducted food costing, the price of the RNFB for one month was highest in Attawapiskat at \$1,909.01. In Fort Albany, located fewer than 100 kilometres south of Attawapiskat, the RNFB costs \$1,831.76 for one month, followed by \$1,639.42 in Moose Factory First Nation, and \$1,560.53 in Moosonee.

The cost of the RNFB decreases as one moves South through Northern Ontario. Fort Albany and Attawapiskat receive the full NNC subsidy.

The data also tell us that in Timmins, the monthly cost of the RNFB was substantially lower (almost less than half of Attawapiskat First Nation) at \$1,056.35. The average cost of the RNFB for one month in the three on-reserve communities was \$1,793.40 and for Moosonee and Timmins it is \$1,560.53 and \$1,056.35 respectively. As a point of comparison, the cost of the NNFB in the following more southern urban locales was: Thunder Bay at \$874.90 (June 2015) and Toronto at \$847.16 (October 2015).<sup>43</sup> In spite of the full NNC subsidy for Fort Albany and Attawapiskat First Nation (\$1.30 and \$1.40 per kilogram, respectively for those food items designated as healthy and nutritious by Health Canada), the cost of food items in these two communities remains prohibitively expensive.

Using conservative estimates of monthly household income in Northern Ontario, on-reserve households in Fort Albany would need to spend more than 50% of their median monthly income on purchasing the 67 items in the RNFB. For comparison, households in Thunder Bay and Toronto would be required to spend 15% and 10.6% of their median monthly household income to purchase the NNFB, respectively.



For households that live on fixed incomes, spending more than half of their monthly income on food leaves little for other basic needs and does not allow for unexpected monthly costs. When forced to choose, people pay for fixed expenses first, and food becomes a ‘flexible’ element of the household budget,<sup>44</sup> despite the centrality of food to ensuring long-term health and well being.<sup>45</sup> In these instances, households are often required to make untenable choices about the kinds, quality, and amount of food that they can purchase. Instead, people often purchase poor quality food that is filling and cheaper, but less nutritious.<sup>46</sup>

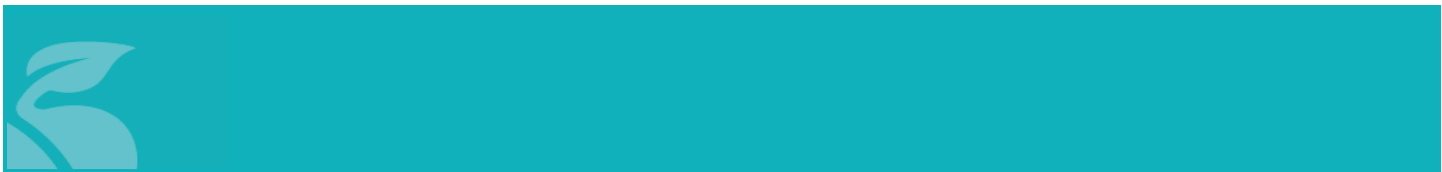
As mentioned at the beginning of this discussion, the descriptive data presented here offers only part of the story. It suggests that, despite having a food subsidy that is meant to lower the cost of foods transported to the north, northern First Nations communities are still paying higher prices for food than even their counterparts (predominantly non-Indigenous) who live in nearby northern cities and towns. This raises more questions than answers. For example, we know that many First Nations communities in southern Canada are also experiencing food security crises at levels that far exceed neighbouring non-Indigenous cities and towns. Reports indicate that

First Nations communities across Canada (indeed, all Indigenous communities, including Inuit and Métis) experience problems with food availability, accessibility, transportation, and high costs that disproportionately surpass their non-Indigenous Canadian counterparts – and that are all reiterated in this report as being a “northern” issue.

We know that although geographical isolation exacerbates the food insecurity of northern First Nations, it is only one of many barriers. This suggests that, although identifying the high cost of foods is a critical exercise, it would seem that the problem of income related food insecurity – the deprivation of basic food needs – in the North is but one piece of a much larger, much more complex puzzle.

The puzzle we refer to extends far into the historical record that ultimately affects First Nations’ ability to exert control and sovereignty over their food. Without the autonomy, resources and capacity to make decisions around land use/development, food procurement patterns (including both traditional and non-traditional foods), and the positioning of Indigenous peoples’ traditional knowledge of the land and its bounties at the forefront of political decision-





making about food, it is unlikely that the problems experienced by northern First Nations communities (or any Indigenous communities in Canada) will be (re)solved.

With the release of the 94 calls to action of the Truth and Reconciliation Commission in June of 2015, we have a responsibility as both Settler and Indigenous peoples to take heed. With respect to addressing food security, a vital aspect of addressing these calls to action involves recognizing Indigenous title to lands and waters, respecting the treaty relationships between Indigenous and non-Indigenous peoples, respecting the processes of free, prior and informed consent in

advance of resource development taking place on Indigenous territories, and absolutely rejecting the Doctrine of Discovery as a founding principle upon which this country is based.

These measures may seem unrelated or peripheral to the issue of high food prices and food insecurity; however, food insecurity in First Nations communities is not an Indigenous issue – it is a Canadian issue. Without addressing these root causes, it is unlikely that singular efforts at reducing food prices (such as ineffective and top-heavy food subsidies) will have a noticeable impact on food security for northern First Nations.



PHOTO: Timmins, by PI 99, Wikimedia Commons



## Barriers to Data Access

It was impossible to construct meaningful expense and household scenarios such as those created as part of FoodARC's Participatory Food Costing methodology<sup>47</sup> given the paucity of current, comprehensive data on the cost of living in on-reserve communities.

While the food costing methods established in this report take one step toward understanding the affordability of a nutritious diet in remote and northern First Nations, information on other essential costs of living is necessary to assess this, and at the moment, there is not enough information available to accomplish this task. While we acknowledge and respect the reasons for which some First Nations communities

choose not to participate in the census and associated forms of data collection and surveillance, the lack of demographic and household data makes it extremely difficult to determine where best to implement programs and supports, especially for marginalized and impoverished communities. Moreover, the lack of data often gets used by the government and related organizations to claim ignorance about food insecurity in on-reserve communities.

As a result, we are confronted with the question: what is the value of undertaking food costing when it is impossible to place these costs within a broader context?



PHOTO: Truck crossing Albany River, by Rev40, Wikimedia Commons



## Reflection on the Ethics of Comparison between North and South, and Community-Based Research

Given that FoodARC was planning to conduct a cycle of Participatory Food Costing as part of the FoodARC's Voices for Food Security in Nova Scotia project around the same time as Paying for Nutrition (June 2015), our original research plan included examining the cost of the NNFB in a subsample of grocery stores in close proximity to First Nation reserves in Nova Scotia.

Nova Scotia serves as an interesting point of comparison because it has the third-highest rate of food insecurity of all the provinces and territories in Canada (18.5% in 2013 and 15.4% in 2014).<sup>48</sup> The strong Participatory Food Costing model developed in Nova Scotia has contributed to significant capacity building for policy and social change, including an active and vibrant network of people and organizations who work to address food insecurity in the province.<sup>49</sup>

Between the two regions, we aimed to draw out conclusions related to food insecurity for First Nations communities in Canada.

However, as the project progressed, the Nova Scotia research team encountered numerous methodological

challenges. Similar to challenges faced by the Northern Ontario team, data reflecting typical incomes and expenses for Nova Scotia First Nations was difficult to find. Gathering this data would have required significant relationship-building to collect locally relevant data in an ethical way,<sup>50</sup> and given that the primary focus of the project was on strengthening the northern network and methodology, relationship-building in Nova Scotia fell outside the scope of the project.

During the process of data analysis, and through conversations with the CoP, we also concluded that presenting the Nova Scotia data alongside Northern Ontario data might lead to simplistic and inappropriate comparisons between the two regions. As discussed above, the cost of food is only one piece in a highly complex puzzle of food security and food sovereignty. Each region has specific historical, geographical, social, cultural, political and economic challenges that impact food security and food sovereignty, as well as specific opportunities to effect change to improve the lives of First Nations communities.



Some of the unique food security challenges faced by rural and First Nations communities in Nova Scotia are similar to those in northern First Nations communities (such as lack of or limited choice of grocery stores, compromised access to traditional foods, higher transportation costs than non-rural areas, high rates of unemployment resulting in low purchasing power, difficulties maintaining access to traditional food sources) and some are very different (fewer challenges in Nova Scotia with respect to seasonal costs of transportation, more exposure to industrial pollution affecting access to traditional food sources).<sup>51</sup>

First Nations communities also possess unique assets. For example, in Nova Scotia many Mi'kmaq communities actively fish and hunt and have wild meat

distribution systems, and possess valuable traditional knowledge around food. Similarly, northern First Nations continue to harvest fresh water and forest foods that require a complex understanding and knowledge of the local environment and its resources that is deeply rooted in social and familial community practices and systems of food sharing.

Based on principles of research ethics and participatory action research, we concluded it was inappropriate to release data sampled in close proximity to Nova Scotia First Nations without meaningful consultation with those Nations. Without meaningful consultation, we did not have the benefit of local knowledge to properly interpret the data, and therefore our findings would not be accurate or relevant and might be inappropriately interpreted by others.





## Recommendations

This project exposed many issues requiring action. Any information must be collected in such a manner that respects the sovereignty of First Nations and is owned by the communities from which it is collected. In order to accomplish this, a new type of relationship between government and First Nations is necessary. Adequate resources must be allocated to support community members who experience food insecurity to be meaningfully involved in the research process from the beginning and throughout, including helping to plan the research, collect and interpret data, and share the findings.





## Recommendations

1. Expand independent food costing in remote stores.
  - 1.1. Government agencies must be responsible for collecting food costs and the costs of a basic nutritious diet on an annual basis, as occurred under the previous Food Mail Program.
  - 1.2. Since NNC already reports data on the RNFB collected from stores, the government must expand the costing list to include essential household items and costs associated with accessing a traditional diet.
  - 1.3. The NNC subsidy must be expanded to include the 24 out of 32 remote communities in Northern Ontario that currently do not receive the full NNC subsidy. A critical step in this process would begin with a study of the affordability of a nutritious diet in those communities that do not receive the full NNC subsidy.
  - 1.4. Recommendations for future costings include: recording the NNC subsidy amount listed on the shelf price tag; factoring in retail profit margins (as per the Auditor General's recommendations);<sup>52</sup> and identifying those foods that are eligible (or not) for the NNC subsidy as part of the larger analysis.
  - 1.5. Also include methods for estimating the costs associated with accessing a traditional diet.
2. Require transparency on the part of NNC in cooperating with researchers. For instance, we were unable to access the same tools necessary to support analysis of food costing data that are used by NNC.
3. Improve data collection for on-reserve communities in order to better adjudicate where programs and supports would be best placed.
4. Efforts must be undertaken to place retailers under local control. The lack of on-reserve retail competition poses an enormous challenge to reducing the price of healthy food. The colonial implications of these oligarchies is troubling and must be addressed by federal and provincial governments.
5. Recognize that lowering the costs of healthy food in northern communities is not enough to address food insecurity.
  - 5.1. A broader comprehensive strategy is needed that includes guaranteed minimum incomes that are indexed to the higher cost of living in the provincial North and that can compensate for the prohibitive cost of a basic nutritious diet.
  - 5.2. Federal funding can be targeted to support grassroots and sustainable community initiatives that have meaning and relevance for each community.
6. Support measures such as policy initiatives and targeted funding to preserve and increase access to traditional foods, given that traditional foods comprise an important part of people's diets and are likely filling the void of affordability.

## **APPENDIX A**

A Guide to Food Costing in Northern Canada

## **APPENDIX B**

Method for Imputing Values for the Prices of Missing Food Items

## **APPENDIX C**

Lack of Available Tools for Constructing Household Scenarios



# A Guide to Food Costing in Northern Canada

A working document

Draft

March 31, 2015

by

Food Secure Canada

In collaboration with

FoodARC at Mount St-Vincent University

Researchers at Lakehead University

and the University of Waterloo



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## About this Training Guide

### IN THIS GUIDE YOU WILL FIND:

A history of this project.

An explanation of food costing.

Reasons for conducting food costing in your community.

An overview of the Revised Northern Nutritious Food Basket, including a brief summary of its limitations.

Helpful definitions of food security and food sovereignty.

Two methodologies, or strategies, for planning a successful food costing

How to understand and use your findings, including considering implications.

Resources to help you plan and conduct food costing in your community.

## Who is this Guide for?

We hope anyone with an interest in food politics can use this guide to further their understanding of food costing and effect change and growth in food knowledge and food policy.

This guide was written for:

Community members  
Community organizations and agencies  
Food actionists  
Health practitioners

First Nations individuals and communities  
Settler populations  
Remote, rural or urban regions  
On- or off-reserve





## Project History

Canada's North comprises 96% of the country's land mass, much of it settled in small urban, rural and remote communities. The culture of living and feeding off the land is more prominent than in the more "developed" south. In recent history, changing populations and ways of life, together with industry and government management of lands and waters, have combined to result in ever-greater reliance upon the grocery store for food.

Indigenous on-reserve households in northern communities typically experience high rates of food insecurity. The main reason is the elevated cost of food and its limited availability in grocery stores. But many other factors contribute to the higher prices, including transportation and fuel costs, food storage challenges, and business practices.

In order to discuss the affordability of nutritious food, food activists in the north have identified food costing as a tool to collect prices based on a standardized grocery list, which can then be compared to the actual cost of living in that region.

This guide was developed to provide an applicable methodology relevant to northern circumstances.

This is because established food costing methods in southern Canada are often not reproducible in the North. It is based on the work and contributions of the Paying for Nutrition project and the experience of food costers living in the Mushkegowuk communities along Ontario's James Bay Coast.

The grocery list we use is based upon the Revised Northern Food Basket (RNFB). This list is currently used by the Aboriginal Affairs and Northern Development Canada (AANDC) to monitor the prices of 67 items that would feed a family of four for one week according to a nutritious diet determined in accordance with Canada's Food Guide. The foods on the list also draw upon information on consumption patterns in the north gathered from nutrition surveys.

Currently, data is self-reported by grocery stores but is often disputed by consumers and activists. This guide uses a participatory method to collect the same data. In certain provinces, public health departments are mandated to carry out food costing annually. However, there is no such obligation on federal reserves.

Our list includes several daily-use household items that are commonly purchased in the grocery store.



We have also added purchasable items used for the procurement of wild food.

The overall goal of the Paying for Nutrition project is to present data that will be useful in continuing Food Secure Canada's advocacy work on food security in the north.

## ABOUT FOOD COSTING

### What is food costing?

Food costing is a way to measure how much it costs to purchase a basic, nutritious diet for one week. A survey tool (see Information about the RNFB, page 49) that reflects nutrition recommendations and typical food choices can be used to calculate weekly food costs for individuals and various households. These expenses can be compared to the cost of living, to the amount of money people earn, and can be used to show how much we must (at minimum) put towards feeding our families.

This information can be used to effect personal and political change. We might, for example, take a second look at our eating and spending habits. We might gain a greater understanding of the challenges faced by low-income families. And we might feel empowered to advocate for lower prices at the grocery store, or with our community leaders, national businesses, and politicians.



## What is participatory food costing?

Participatory food costing is the process of partnering with the people who live in the communities and shop at the stores being examined. As partners in a study, the people most impacted by the issues are brought in to design the project, make decisions, collect data, and then interpret and use the results. Participation levels may vary, but the insight and perspective of participants can shape the goal of the project to respond to real and actual needs.

Involving community members in food costing allows us to play an active role in learning food literacy. A shared process empowers and encourages us to find solutions in ways most meaningful to us. This guide provides information needed for a food costing project in your own community.

## Why conduct a food costing study in your grocery store?

Many of us rely on grocery stores to provide some portion of our daily food intake. For those who cannot rely upon foods they have grown, hunted, fished or gathered, access to a store is essential.

The grocery store plays a large role in shaping our food environment. Studying what kinds of foods are available for purchase, and looking at issues of access to affordable nutritious food, is a way of understanding individual and household food security.



## What makes it so different in the North compared with other regions in Canada?

There are many differences between the north and the south in Canada that shape how we eat, how we access our food, and how it fits into our overall budget. Some of the following factors contribute to the high cost of food in the north:

**Smaller** populations, perhaps with less varietal demands.

**Fewer** grocery stores, sometimes just one, that carries fresh, perishable items. Often, that one grocery store is part of a chain that has a virtual monopoly on the region.

**Higher** transportation costs.

**Higher** heating, cooling, lighting, and building maintenance expenses.

**Unreliable** availability of foods due to weather and other unforeseen circumstances.

**Greater** risk of damage to perishables.

## Nutrition North Canada subsidy

In April 2011, the Canadian federal government began a new program to subsidize the high cost of foods in the north, called Nutrition North Canada. Retailers must apply to the government to become suppliers. If accepted, they file reports to receive subsidies on foods flown into eligible northern communities. The subsidy is applied mainly to perishable and nutritious foods, and the amount is based on destination, weight and certain categories of foods. Retailers are responsible for passing along the savings to their customers and for self-reporting their prices to the program administrators.

You may be costing food in a remote community where NNC is available. Any item that receives a subsidy should be clearly indicated on the shelf price tags.



## Information about the RNFB and a summary of its uses and limitations

The Revised Northern Food Basket is survey tool created by Health Canada to monitor the cost of healthy eating in isolated northern communities. It was designed to reflect a diet that satisfies the nutritional intake recommended for a family of four. Based on surveys, the list also reflects typical food choices of Inuit and First Nations peoples. It contains a list of 67 items and the specific quantities in which they would be purchased.

The important thing to understand is that the RNFB is based on an **average overall consumption** for a **sample population**. It does not represent a typical week's purchase for a family. For example, you and your family may not purchase these foods or the quantities described each week, if ever.

The RNFB does not try to substitute for a weekly grocery list, it is not a budgeting tool, and it might not even represent the most nutritious diet. It does not include non-food items such as diapers, laundry soaps, toilet paper typically purchased at the grocery store.

The RNFB does not include foods from the land which you and your family may eat every week but do not purchase. Nor does it incorporate food dollars spent at restaurants, farmers' markets, or convenience stores. Finally, it assumes that the meals in your weekly diet were mainly made from scratch.





## So why use the RNFB?

This is the standard tool accepted by statisticians and governments to monitor the price of food. The RNFB is a list of foods that represent a basic nutritious diet but is not meant to stand in for a weekly shopping list or household budget tool. It is a proxy – one way to measure something that is very complex.

Because the RNFB is a widely accepted measuring tool, northern grocery stores are more likely to stock these items. Grocery stores claiming the NNC subsidy are obliged report on their prices for the food basket.

The RNFB is intended to be reproducible across the north. The data collected can be analyzed to show the cost and affordability of a basic nutritious diet in a specific region. It can be viewed as a language we all agree to converse in so we understand each other and work for food policy change.

“Foods from the land,” also called traditional foods, forest and freshwater foods, wild food, country food; essentially, all foods hunted, fished or gathered. These may “grow wild” but more often are “managed” or “stewarded,” their place within the ecosystem understood by the people who live with and depend upon them.

Because these foods exist outside the market system, it is a challenge to figure out how to include this extremely important piece of our diets within a food costing comparison.



## METHODOLOGY

It is very important to record prices using a method that can be repeated by people in different locales and which accurately captures the average prices paid by community members.

This guide provides two options to follow while collecting food costs in northern Canada. Both methods use the Food Cost Collection Tool provided in Appendix A.

### Preparing participants for food costing

Food costing requires a functional level of food literacy. Participants must have basic reading and math skills as well as a familiarity with shopping for food. Food costers must be able to read labels, packages and store signs, understand measurement units, and be able to compare costs in order to choose the lowest priced item available. Often, food cost volunteers are the main grocery shopper for their household and already have an interest in food and food issues.

For the training session, you may want to schedule a later session to work through calculating the cost of the food basket as well as looking at affordability scenarios.

Ensure that food costers feel confident using the Food Cost Collection Tool and can dedicate at least two hours for the official food costing process.

### A Sample Training Session (5 hours) could include:

Exploring participants' interest in food costing.

Discussing goals and expectations of the project.

A review of the Food Cost Collection Tool and instructions for use.

Taking time to troubleshoot, answer questions and concerns, and discuss common problems to allow participants to feel comfortable with the process.

A practice food costing at a grocery store.

Debrief, making plans for next steps, and a discussion of how to use the findings.



## Selecting stores for food costing

Food costing should be done in food stores that stock a full line of grocery products, including fresh and perishable items such as fruits and vegetables, dairy products, and meats.

Ideally, you should choose a store in which you can expect to find all the items on the Food Cost Collection list. In many smaller communities, there may be only one full grocery store.

Before you undertake food costing ask yourself the following question: Do you feel comfortable requesting permission from the store manager to conduct food costing? If you are not comfortable there is another option. Please see the next page for two approaches to collecting food prices.

Sometimes food costing can take a larger sampling into account by using data from multiple stores in different communities, or from different types of grocery stores. For example, some regions may have more than one store to choose from, such as independent and chain stores. Both small and large stores can be found serving smaller or larger communities in rural, remote and urban locations.

If you have more than one retail option in your community, or would like to conduct a regional survey, you can obtain an average cost by visiting at least three grocery stores. Begin by defining the geographic area you are surveying. Choose your stores by making random selections in the region.

Another approach is to formulate a theme or specific category you wish to study, and choose the stores accordingly. For example, perhaps you want to look at “stores in low-income neighbourhoods.”



## Method 1: In-store

Food price collection usually occurs with the permission of local storeowners or, in the case of chain grocery stores, with the collaboration of head offices or store managers. A sample letter seeking permission of the store is provided in Appendix C.

If you are successful in gaining permission, you may choose to use the in-store method of food cost collection. With the Food Cost Collection Tool, locate each item in the store and fill out the form.

This method usually takes 2 hours to complete. A detailed explanation of the tool and how to use it is in the next section. As this method depends on price tags to accurately identify the cost of the items, be sure to read each tag to ensure it belongs to the correct item, brand, size, and price.

## Method 2: In-home

Sometimes it happens that store managers may refuse to let you conduct in-store food cost collection. Food costing in northern Canada creates a heightened focus not only on the stores, but also on the individual collecting food costs. For any number of reasons, collecting food costs in-store may not be possible or desirable.

The in-home method involves using the Food Cost Collection Tool as a shopping list to purchase the items and then recording the prices at home. This method is much more costly than the in-store method. However, it offers accurate prices, anonymity, and the opportunity to assess food quality and best before dates in greater detail.



## Ideas to help make this option affordable

Team up with local agencies (such as well-baby programs) to purchase foods that can then be used by community programs.

Ask organizations (universities or public health units) with an interest in food cost collection data for support.

Engage local shoppers to submit receipts that indicate the cost of items being collected.



PHOTO: Serena LeBlanc





## Using the Food Cost Collection Tool

This is the tool provided for recording food costs. It can be used with both the in-store and in-home methods.

A item	B preferred unit	C brand name	D purchase size	E cost	F sale price	G expiry date	H com- ments
2% milk fresh	2 L						
Mozarella cheese bar	400 g						
Flour all purpose	5 lb						
Tomatoes canned, whole	215 ml						

### ITEM

In column A you will find the complete list of items (food and other) for which you are collecting prices.

Make sure the specific item you price matches the description asked for on the list. Sometimes an item comes in many formats. For example, if the list indicates milk 2% fresh, do not price for any other milks (such as skim, chocolate, homogenized, lactose-free, tinned, powdered, shelf milk, and so on).

For column B, find the lowest costing item available in the preferred size as indicated. If that particular item or size is not available but there is a description and price tag on the shelf, then record the pricing and unit size details and in column H ( comments) write that the product was “out of stock.”

If the item is neither available nor marked on the shelf, you can do any of the following:

1. Ask a store employee or manager what the cost would be if it was available, and record that price. Also record in the comments section that the item is n/a (not available).
2. Try to substitute with a similar item. Record the item and price of the substitution. Also record in the Comments column that the item is n/a.

### PREFERRED UNIT

Column B indicates the exact size of the item to be costed. If the product is available in the size requested, record that price. Do not choose a different size, even if the price is lower (except for the reasons listed above).

Column C is where you can write the brand name. The brand selected should be the lowest priced product available which meets the item described in columns A and B.





Column D is where you can record the nearest available size if the preferred size is not available. If it matches the size in column B, write that. If the preferred size from column B is not available, find the nearest size. Record the measure (for example, ml for millilitres) and size (number of ml) so it looks like this: 398 ml.

Column E is where you can record the cost of the item. Use dollars and cents, so it looks like this: \$11.49. Always choose the lowest costing item that best fits the description. If you are using the in-store method, list the tag price. If you are using the in-home method, list the price based on the printed receipt. If the item is on sale you may also want to make a note of the price in column F to match up with the price on the receipt later on.

Column F is where you can record the sale price. If the item happens to be on sale, write both the regular and sale prices. Whenever possible, ensure that the regular price is listed in column D. Do not cost an item that has been temporarily discounted (for example, meats or bread nearing their expiry date with a 50% off sticker on the package.) Once sold, this particular item at that price is not available to all shoppers.

Column G is where you can record the expiry date of the item at the time the cost was collected.

Column H is for comments where you can note any extra details that you think are relevant. For example, quality or freshness, availability of items or quantities, substitutions, and so on. Write the brand and cost of preferred choice.

## About the items on the list

There are 83 items on the Food Cost Collection form in Appendix A. These items reflect some of the items included on both the National Nutritious Food Basket (NNFB) and the Revised Northern Food Basket (RNFB) as well as a number of additional items added by northern residents in order to better reflect the cost of living (such as toilet paper, infant formula, personal hygiene, and so on).

We have chosen to combine the two lists commonly used for food costing in different regions in order to give us greater options in comparing costs between North and South.



## COMMON PROBLEMS AND SOLUTIONS

### Availability

In many northern communities, it is common that items on the list are unavailable at the time of cost collection. When using either method, ask store staff about the item. If it is out of stock they should be able to provide the last price it sold for and give you an estimated date for when they will restock it. If the item is not in stock, write n/a in the price column. Never enter \$0 for any unavailable items.

### Quality

If items are marked down due to poor quality, record the regular price in column E and write the discounted price in column F. Use column H to describe why it is discounted (past due, old, and so on). A suggested list of priority items includes ground beef, chicken legs, apples, bananas, grapes, carrots, fresh potatoes, fresh bread, and frozen mixed vegetables. In order to assess the quality of other foods, particularly grain and dairy products, the expiry date of the product will be recorded in column G. The feasibility of recording the expiry dates is being tested in this methodology and as such the list of priority items may be revisited. A suggested list of priority items includes 2% fresh milk, yogurt, cheese, enriched white bread, and 100% whole wheat bread.

### Seasonal variations

Costs may vary between seasons due to local factors such as the availability of roads, barges, and airplanes. In response to local seasonal variations we are attempting to replicate cost collection in both the spring and winter. For the Paying for Nutrition project, costing will be replicated in Fort Albany and Moosonee.

### Traditional Foods

Forest and freshwater foods (such as moose, fish, and berries) and Inuit country foods (such as whale, caribou, and seal meat) are the primary sources of local food for many northern residents. Although most northern diets contain these foods and they form an essential part of the overall diet, they are not included on the list as they are typically obtained outside of the market-based food system.



## SAMPLE DATA COLLECTION TOOLS

Community Name:			Date:		
Submitted By:					
<b>TABLE I</b>					
<b>Revised Northern Food Basket, Perishable</b>					
ITEM	PREFERRED UNIT	RNFB QUANTITY	ACTUAL QUANTITY	ACTUAL COST	DIS-COUNT/SALE COST
2% milk fresh or UHT	2 L	4.76 L			
Cheese, mozzarella	500 g	485 g			
Cheese, processed slices	24 slices	385 g			
Yogurt	650 g	1.67 kg			
Large eggs	12 pack	8			
Chicken drumsticks	1kg family pack	2.68 kg			
Pork chops, loin		1.21 kg			
Ground beef, lean		1.34 kg			
Steak, t-bone		470 g			
Ham, sliced		135 g			
Fish sticks, frozen		135 g			
Bologna		60 g			
Wieners		100 g			
Peanut butter		90 g			
Bread, enriched white	2 litre	660 g			
Bread, 100% whole wheat		660 g			
Oranges		1.23 kg			
Apple juice, frozen		130 ml			
Orange juice, frozen		1.13 L			
Apples	3 lb	4.38 kg			



**TABLE I**  
**Revised Northern Food Basket, Perishable**

ITEM	PREFERRED UNIT	RNFB QUANTITY	ACTUAL QUANTITY	ACTUAL COST	DIS-COUNT/ SALE COST
Bananas		3.58 kg			
Grapes		500 g			
Potatoes, fresh, red	10 lb	3 kg			
French fries, frozen		480 g			
Carrots, bag		2 kg			
Onions		695 g			
Cabbage		520 g			
Turnips		350 g			
Broccoli, frozen		695 g			
Carrots, frozen		260 g			
Corn, frozen		260 g			
Mixed vegetables, frozen		1.74 kg			
Margarine, non-hydrogenated		715 g			
Butter		65 g			
				TOTAL	\$



## SAMPLE DATA COLLECTION TOOLS

Community Name:			Date:		
Submitted By:					
<b>TABLE 2</b>					
<b>Revised Northern Food Basket, Non-Perishable</b>					
ITEM	PREFERRED UNIT	RNNFB QUANTITY	ACTUAL QUANTITY	ACTUAL COST	DIS-COUNT/ SALE COST
Milk, 2 %, evaporated	1.58 L				
Skim milk, powder	90 g				
Pink salmon, canned	270 g				
Sardines in soya oil	270 g				
Ham, canned	200 g				
Pork-based luncheon meat, canned	50 g				
Corn beef, canned	40 g				
Beans with pork, canned	290 ml				
Beef stew, canned	180 g				
Spaghetti sauce with meat, canned	155 ml				
Flour, all purpose	1.92 kg				
Pilot biscuits	275 g				
Macaroni or spaghetti	385 g				
Rice, long-grain parboiled white	330 g				
Rolled oats	275 g				
Corn flakes	440 g				
Macaroni and cheese Dinner	550 g				
Apple juice, tetrapak	880 ml				





**TABLE 2**  
**Revised Northern Food Basket, Non-Perishable**

ITEM	PREFERRED UNIT	RNNFB QUANTITY	ACTUAL QUANTITY	ACTUAL COST	DIS-COUNT/ SALE COST
Orange juice, tetrapak	375 ml				
Tomatoes, whole, canned	215 ml				
Tomato sauce, canned	300 ml				
Fruit cocktail in juice, canned	855 ml				
Peaches in juice, canned	285 ml				
Pineapple in juice, canned	285 ml				
Potato flakes, instant	220 g				
Green peas, canned	900 ml				
Corn, canned, kernel	1.09 L				
Green beans, canned	315 ml				
Carrots, canned	325 ml				
Mixed vegetables, canned	545 ml				
Canola oil	185 ml				
Lard	105 g				
Sugar, white	600 g				
				TOTAL	\$



## SAMPLE DATA COLLECTION TOOLS

Community Name:			Date:		
Submitted By:					
<b>TABLE 3</b>					
<b>Items in addition to Revised Northern Food Basket Items</b>					
ITEM	PREFERRED UNIT	RNNFB QUANTITY	ACTUAL QUANTITY	ACTUAL COST	DIS-COUNT/ SALE COST
Toilet paper					
Diapers, Pampers, size 4					
Baby formula, powdered					
Advil, children's					
Sanitary pads	regular				
Water, bottled	6 pack				
Toothbrush					
Toothpaste, cavity protection					
Marten trap					
Snare wire, rabbit					
Gasoline					
Energy drink, Red Bull					
Chocolate bar, KitKat					
Chips, Old Dutch regular					
Pepsi Cola	2 litre				
Raisin Bran, Kellogg's					
				TOTAL	\$

## APPENDIX B

### Imputing values for the prices of missing food items

To account for missing food items, we came up with a consistent method of inputting a value for that item.

In the First Nations of Fort Albany, Attawapiskat, and Moose Factory, we used the average of the same item from the other two stores to produce a value. If two stores did not have an item, we used the value from the only store that had the item. When all stores were missing an item, we used the average price of the non-reserve communities in the study to replace the missing item.

The same methodology was used to substitute missing values for Timmins. Because there is more than one store in Timmins, in cases where particular items were unavailable customers could go to another store. In cases where the item was not available at all, then an average across all communities was used. For Moosonee, when the store had missing data, an average from all the other stores in the study was used. Moosonee shares similarities with the other communities in terms of transportation of food to the community.



## APPENDIX C

### Lack of Available Tools for Constructing Household Scenarios

#### The need for scalars, weights, and factors to construct weekly costs of the RNFB for various household scenarios

The **Scalar** is a factor applied to the purchase price of each item in the RNFB in order to convert foods within a food group into a common unit of measure to facilitate comparison. For example, converting all milligram measurements to kilograms. This creates a “scaled price.”

The **Weight** is a way of showing the relative importance of foods within a food group. The Scaled Price is multiplied by the Weight to determine a Weighted Price. Adding up all of the Weighted Prices for each food in a food group results in a weekly cost per food grouping.

The weekly cost per food grouping is multiplied by a **Factor**, specific to each food group, and specific to the age(s) and gender(s) of each person in a household scenario.

This process of using appropriate Scalars, Weights, and

Factors allows for the calculation of the weekly food costs for individuals of different ages and genders, and for families of any size.<sup>53</sup>

Currently, the amounts of each food item in the RNFB allows for the determination of weekly food costs for a family/household of four - a woman and a man ages 31 to 50 years, a boy age 13 years, and a girl age 7 years. To make calculations of the weekly cost of the RNFB for any other household composition requires up-to-date scalars, weights, and factors.

When we realized we needed scalars and weights to calculate the cost of the RNFB for different household compositions, we first contacted Pat Vanderkooy. Pat, a member of our Research Advisory Team, was contacted via email on November 2, 2015, to see if she could connect us to colleagues that might have access to either the scalars and weights or the actual database that Nutrition North Canada uses to calculate the



cost of the RNFB for each community receiving the subsidy. Pat connected us to territorial nutritionists for Nunavut and the Northwest Territories as well as the Senior Nutritionist at Health Canada to try and access this information.

While these people were able to provide some information about food costing in their own regions, they did not have details on the scalars and weights. Health Canada tried for a few weeks to contact the Director of Nutrition North Canada for us, but did not receive a response and suggested that we contact the Director directly. An email and phone call on December 9, 2015, went unanswered. It was then suggested that we contact someone else in the government working on the NNC program. We did that and she was able to dig up the scalars from 2007 in an old file. We were sent that on January 18, 2016, but it did not include the weights.

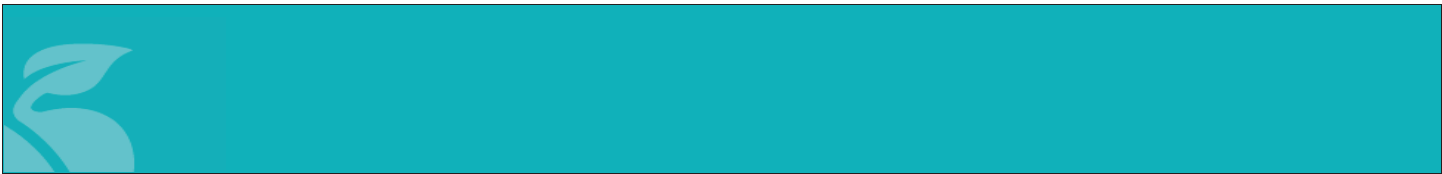
We contacted a colleague who previously worked with the Food Mail Program to obtain the weights and on February 16, 2016, we were able to get a copy of the 2007 weights. This colleague tried to update the weights to data from 2011, but indicated that the Nutrition North Canada Program should have the most current weights and be able to provide them to us. We made another attempt to get a copy of the database or file that Nutrition North Canada uses, but did not receive a response.



## ENDNOTES

1. The term Indigenous is used globally to refer to people whose traditions and histories remain linked to a particular territory. Unless otherwise stated, we are using the term Indigenous in this report to refer to all peoples who are Indigenous to Canada, which includes First Nations, Inuit, and Métis peoples. In the Canadian Constitution, these three groups are collectively referred to as Aboriginal, but in recent years, Indigenous peoples are choosing to identify with the term 'Indigenous' as it rejects what is considered to be the more colonially imposed term Aboriginal.
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37. This household of four includes a woman and a man ages 31 to 50 years, a boy age 13 years, and a girl age 7 years.
38. These amounts only represent the cost of the RNFB and do not include additional living expenses such as shelter, electricity, transportation, or clothing.
39. This household of four includes a woman and a man ages 31 to 50 years, a boy age 13 years, and a girl age 7 years.
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