



Nova Scotia  
Nutrition Council

# **Building Food Security in Nova Scotia Through Participatory Food Costing: 2004/05 Food Costing Update**

June 2006

**AHPRC**  
Atlantic Health  
Promotion  
Research Centre

## **What is Food Insecurity?**

**Food insecurity** is defined as the inability to "obtain sufficient, nutritious, personally acceptable food through normal food channels, or the uncertainty that one will be able to do so".<sup>1</sup> The Atlantic Health Promotion Research Centre (AHPRC), Nova Scotia Nutrition Council (NSNC), and individuals in Family Resource Centre/Projects (FRC/P) throughout Nova Scotia, understand that food insecurity has been an ongoing reality for a significant number of Nova Scotian families. These groups have been working together, funded by the Nova Scotia Department of Health Promotion and Protection (NSHPP), to promote and support the development of policies and practices to build food security. Participatory food costing was first conducted by these groups throughout the province in 2002 with funding from Health Canada.<sup>2</sup> This summary report updates those findings with new data from 2004/05. While many positive changes have been made, the new data indicate that there is still collaborative and multi-sectoral work to be done to build food security in Nova Scotia.

*The reasons for the concern about food insecurity can be understood when we examine the following statistics....*

- *17% of Nova Scotians reported experiencing some form of food insecurity in 2000-2001<sup>3</sup>*
- *Over 1 in 5 children in NS live in poverty<sup>4</sup>*
- *NS has one of the lowest minimum wage rates in the country at \$7.15/hr<sup>5</sup>*
- *Over 25,453 NS citizens were assisted by accessing a food bank in March 2005<sup>6</sup>*
- *Lone mothers from NS are 3.3 times more likely than those from other Atlantic Provinces to experience food insecurity<sup>7</sup>*

## **What is Participatory Food Costing?**

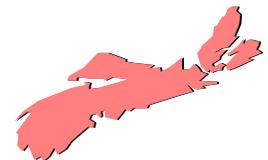
Participatory approaches aim to support active involvement of those most involved, affected or potentially impacted, by an issue.<sup>8</sup> The food costing projects have used participatory research to examine the affordability of a nutritious diet in Nova Scotia. People involved in FRC/Ps and Women's Resource Centres throughout Nova Scotia were involved as food costers in their communities.

## **Why conduct Participatory Food Costing?**

Researchers and community members need strong evidence to monitor, and advocate for, food security. Government policy makers need relevant data for evidence-based decision-making. Participatory Food Costing helps to build the community capacity necessary to influence policies to build food security.

## **Where was this project completed?**

In 42 grocery stores, within various communities throughout District Health Authorities (DHAs) in Nova Scotia, Canada.



## **When was the Food Costing conducted?**

Spring and fall represent the times of year with the least seasonal variability in food cost; therefore, food costing took place during the weeks of October 25th - 30th, 2004 & June 13th - 18th, 2005.

## **Who did the Food Costing?**

A total of 41 participants and 8 support people in 15 FRC/Ps and one Women's Centre throughout the province in partnership with the NSNC and the AHPRC.

# Measuring Food Security in Nova Scotia

## What is the National Nutritious Food Basket?

The food costers used a tool called the *National Nutritious Food Basket (NNFB)*<sup>9</sup> to estimate the costs of a healthy diet across the province. The model "Food Basket" was developed by Health Canada and includes a list of 66 foods representing a "bare bones" nutritious diet. In the Nova Scotian research, the NNFB has been used to estimate the costs of feeding four different family types in Nova Scotia, as well as the costs for 23 different age and gender groups, including pregnant and breastfeeding women.

## How Much Does it Cost in Nova Scotia To Purchase a Nutritious Diet for my Family?

Using Table 1 on page 3, we can quickly estimate how much it could cost to feed our families a nutritious diet. Let's assume...

### The "Smith" Family consists of:

Mother and Father both between 25 and 49 years of age and two children, a girl aged 7 and a boy aged 14.

Follow the steps on this page to find out how much a nutritious food basket costs the Smith family for one week. Go through the steps again, substituting the amounts for members of your family, to find how much it could cost for your family to eat nutritiously.



**Step 1:** Write down the ages and gender of all the people you are feeding.

**Using the Smith family ...**

*Mother: female between 25 and 49 years;*

*Father: between 25 and 49 years; and*

*Children: A girl aged 7 and a boy aged 14.*

**Step 2:** Using the chart on the following page you can figure out the costs of a nutritious diet, based on the NNFB:

Mother:	\$31.69
Father:	\$42.91
Girl aged 7:	\$27.05
Boy aged 14:	<u>\$40.94</u>
<b>Total</b>	<b>\$142.59</b>

**Step 3:** Since it costs a little more per person to feed small groups of people and a little less to feed larger groups, you may have to adjust the total cost estimated in Step 2 for your family. Use the following adjustment for family size, as it applies to your situation:

**1 person: increase costs by 15%**

(multiply food costs by 1.15)

**2 persons: increase costs by 10%**

(multiply food costs by 1.1)

**3 persons: increase by 5%**

(multiply food costs by 1.05)

**4 persons: no change**

**5 persons: decrease food costs by 5%**

(multiply food costs by .95)

**6 persons: decrease costs by 10%**

(multiply food costs by .90)

**Step 4:** If you want a monthly rate, multiply your weekly food costs by **4.33**  
( $\$142.59 \times 4.33 = \$617.42$ )

Therefore, it would cost the Smith Family \$617.42 to eat a basic nutritious diet each month, based on the 2004/05 food costing data.

# Food Costing Data in Nova Scotia: 2004/05 Update

**Table 1: Weekly Costs of a Nutritious Food Basket in Nova Scotia by Age and Gender Groups (2004/5)\***

Sex	Age (years)	Cost per Week (\$)
Child	1	17.10
	2-3	17.96
	4-6	23.76
Boy	7-9	28.01
	10-12	35.01
	13-15	40.94
	16-18	47.17
	19-24	44.32
Girl	7-9	27.05
	10-12	32.50
	13-15	34.60
	16-18	32.49
Man	19-24	33.17
	25-49	31.69
	50-74	31.11
	75+	30.30
Woman	19-24	33.17
	25-49	31.69
	50-74	31.11
	75+	30.30

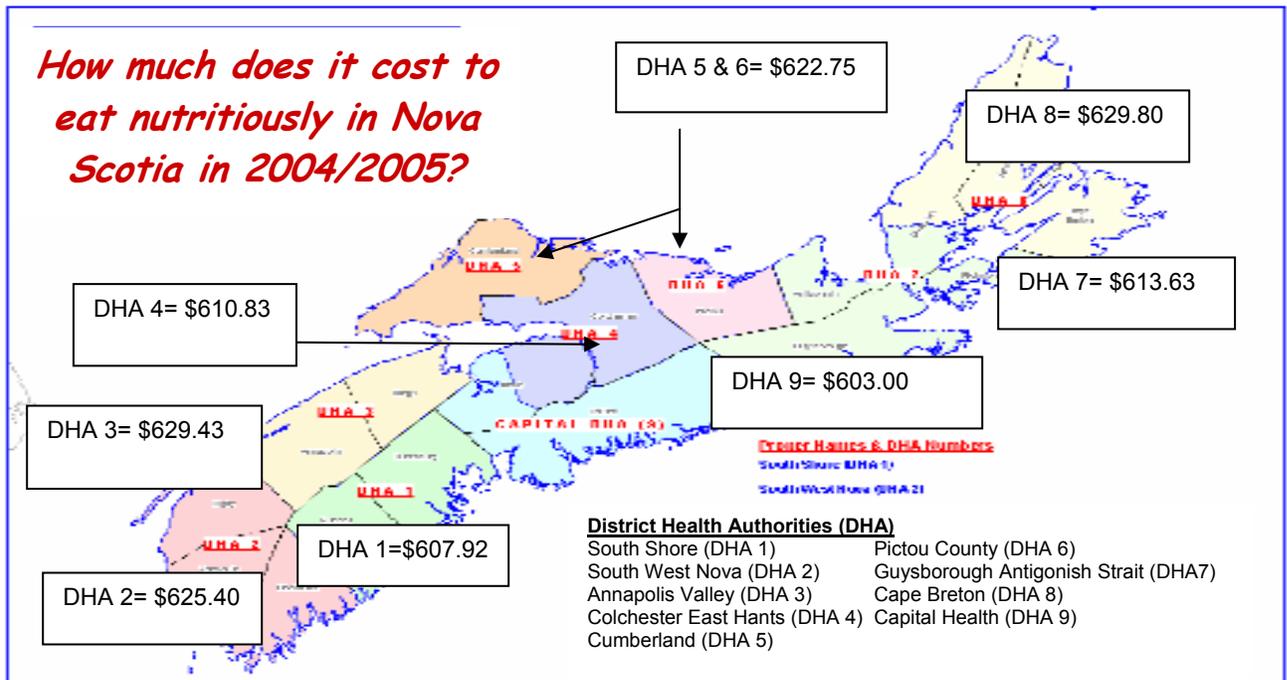
Stage of Pregnancy or Breastfeeding	Age of Mother (years)	Cost per Week (\$)
Trimester 1	13-15	38.59
Trimesters 2,3		40.78
Breastfeeding		41.96
Trimester 1	16-18	38.18
Trimesters 2,3		41.21
Breastfeeding		42.29
Trimester 1	19-24	37.31
Trimesters 2,3		39.79
Breastfeeding		40.74
Trimester 1	25-49	35.81
Trimesters 2,3		38.02
Breastfeeding		38.81

*\*Based on costs of purchasing a Nutritious Food Basket for individuals shown in each age and gender group. Note that each value is an estimation and may vary based on personal circumstances. These prices do not include such things as toiletries, cleaning supplies, etc.*

### So how does your family compare?

The following map shows the average monthly cost of feeding a family of four nutritiously, based on the National Nutritious Food Basket, in each DHA in Nova Scotia. Although this varies across the province, on average it costs **\$617.42/month** to feed a family of four a nutritious diet in Nova Scotia.

**This is a 7.7% increase from 2002 food costs!**



## How affordable is a basic nutritious diet for families in Nova Scotia?

The information presented above may be interesting, but what exactly does it mean? To try to put these numbers into context and to estimate the affordability of a nutritious diet, monthly costs for food, shelter, and other expenses deemed essential, were compared to potential monthly incomes for four sample household types:

- 1) two adults between 25-49 years, with two children - a boy of 13 years and a girl of 7 years;
- 2) a lone mother between 25-49 years, with two children - a boy of 7 years and a girl of 4 years;
- 3) a lone mother between 25-49 years (attending university), with two children - a boy of 7 years and a girl of 4 years; and,
- 4) a single adult male with no children.

Income scenarios were based on the 2002 median Nova Scotian annual family income of \$55,300; earnings of the average call centre wage of \$12.45/hour; current minimum wage of \$7.15/hour; and current Income and Student Assistance rates in Nova Scotia.<sup>10</sup> Expenses were based on the best estimates available for housing and utilities, transportation, childcare, tuition, and other expenses.<sup>11</sup> **PLEASE NOTE:** Complete methodological details and references for income and expenses used in the calculation of the sample "affordability scenarios" will be provided in the full final report.

Consistent with 2002 food costing findings, these results demonstrate that many families in Nova Scotia cannot afford a basic nutritious diet. These results show that the situation has not improved for Nova Scotians relying on minimum wage jobs or Income Assistance. In fact, our findings show that the average cost of a basic nutritious diet has **increased** from \$572.90 to \$617.42/month for a family of four between 2002 and 2004/05 in Nova Scotia, an increase of **almost 8%**!

The food costing data show that many families do not have sufficient income to purchase a basic nutritious diet - and in fact may "go into the red" each month they attempt to do so. Families may be required to compromise their nutrition in order to afford essential expenses such as shelter and utilities. There may be little disposable income for other expenses such as personal hygiene products, household and laundry cleaners, prescriptions, costs associated with physical activities, education or savings for unexpected expenses.

Does the cost of purchasing a nutritious diet for a family of four differ between rural and urban areas of Nova Scotia?



Urban: \$597.11/month



Rural: \$624.65/month

Consistent with findings in 2002, the cost of the National Nutritious Food Basket was significantly higher in rural compared with urban areas of Nova Scotia.

For the purposes of this research, rural has been defined as towns and municipalities outside of the commuting zone of urban centres with a population of 10,000 people or less. An urban area is defined as a community with a population greater than 10,000 people.

## Family of Four - 2 adults and 2 children

**Table 2** presents the potential financial impact of purchasing the NNFB for a family of four living in Nova Scotia with four different income scenarios. According to the Nova Scotian NNFB data, a basic nutritious diet for a family of four in 2004/05 would cost, on average, \$617.42/month. When monthly costs for food, shelter, and other expenses considered essential for a basic standard of living, are measured against minimum wage monthly incomes for a family of four with one adult working full time and the other part time, the findings suggest this family could face a deficit of \$427.93. The same family of four relying on Income Assistance could face a deficit of \$380.53. The results show that even with the April 2006 increase to \$7.15/hour in minimum wage rates, and recent increases to Income Assistance, households relying on these current rates cannot afford a basic nutritious diet.

*Table 2 - Two parent family, 2 children*

Family Composition	Male & Female (b/w 25-49y)	Male & Female (b/w 25-49y)	Male & Female (b/w 25-49y)	Male & Female (b/w 25-49y)
	Boy 13, Girl 7	Boy 13, Girl 7	Boy 13, Girl 7	Boy 13, Girl 7
Source of Income	Median NS Family Income (2004)	Avg. Call Centre Wage - \$12.45/hr (1FT, 1PT)	Minimum Wage - \$7.15/hr (1FT, 1PT)	Income Assistance
Monthly Net Income				
Wages	\$2,822.29	\$2,273.30	\$1,317.84	\$0.00
Personal Allowance	n/a	n/a	n/a	\$380.00
Shelter Allowance	n/a	n/a	n/a	\$600.00
Childcare Allowance*	n/a	n/a	n/a	\$279.00
Child Tax Benefit	\$138.98	\$193.93	\$457.91	\$564.15
GST/HST Credit	\$0.00	\$19.63	\$57.83	\$57.83
<b>Total</b>	<b>\$2,961.27</b>	<b>\$2,486.86</b>	<b>\$1,833.58</b>	<b>\$1,880.98</b>
Basic Monthly Expenses				
Shelter	\$615.72	\$615.72	\$615.72	\$615.72
Power/heat/water	\$161.93	\$161.93	\$161.93	\$161.93
Telephone	\$23.00	\$23.00	\$23.00	\$23.00
Transportation	\$377.67	\$377.67	\$377.67	\$377.67
Childcare**	\$279.00	\$279.00	\$279.00	\$279.00
Clothing, footwear, etc.	\$186.77	\$186.77	\$186.77	\$186.77
Funds remaining for food	<b>\$1,317.18</b>	<b>\$842.77</b>	<b>\$189.49</b>	<b>\$236.89</b>
Cost of the NNFB	<b>\$617.42</b>	<b>\$617.42</b>	<b>(\$617.42)</b>	<b>(\$617.42)</b>
Funds remaining for other expenses	<b>\$699.76</b>	<b>\$225.35</b>	<b>(\$427.93)</b>	<b>(\$380.53)</b>

In Tables 2 and 3, full time = 40 hours/week; part time = 20 hours/week.

\*Income Assistance recipients may be eligible for up to \$400/month in childcare allowance.

\*\*Childcare expenses are based on average monthly costs in HRM for the before school/lunch/after school "Excel" program (\$279/month for 7 year old); no childcare expense for 13 year old.

In Tables 2-5, CCTB/GST amounts are estimates only, and are based on gross income and childcare expense for 10 months (Sept.-June).<sup>12</sup>

**PLEASE NOTE:** Basic monthly expenses in all scenarios do not include other routine costs, such as personal hygiene products, household and laundry cleaners, and prescriptions, costs associated with physical activities, education or savings for unexpected expenses.

## Family of Three - Female Lone Parent with 2 children

**Table 3** presents the potential financial impact of purchasing the NNFB for a household consisting of a lone mother working for minimum wage or receiving Income Assistance. A basic nutritious diet for a lone female parent working full time with two children would cost, on average, \$386.18/month in 2004-05. In fact, this family would face a deficit of \$373.84 on minimum wage earnings and a deficit of \$129.84 on Income Assistance after the cost of the NNFB is factored in. As in the above scenario, 2004/05 food costing data show that even with recent increases in minimum wage and Income Assistance rates, this household cannot afford a basic nutritious diet. Even if the mother receiving Income Assistance were receiving child maintenance, it would provide no real increase in finances, as child maintenance does change Income Assistance.<sup>10</sup> (Guide to ESIA)

Some families relying on Income Assistance or minimum wage may secure a subsidized day care space for their pre-school child(ren), and be eligible for the maximum subsidy, thereby paying a fee as low as \$2.25/day.<sup>11</sup> (Childcare Subsidy) However, not every family has this opportunity and some centres charge higher per diem rates than permitted in the IA budget, thus resulting in additional fees for the family. There are approximately 2,750 subsidized daycare spaces available in Nova Scotia, but these spaces and rates are not guaranteed to be available for all low income applicants.<sup>11</sup>(Childcare Subsidy) Some families may be able to access subsidized centre or other program-based care for their school-aged child (such as "Excel" - a before school, lunch and after school program - available in the Halifax Regional Municipality).<sup>11</sup>(Excel Childcare Program) However, without these possibilities, childcare costs may escalate for school-year and/or summer childcare. Families outside of urban areas may experience different childcare rates and availability.

**Table 3 - Female lone parent family, 2 children**

Family Composition	Single Female (24y)	Single Female (24y)
	(Boy 7, Girl 4)	(Boy 7, Girl 4)
Source of Income	Minimum Wage (FT)	Income Assistance
<b>Monthly Net Income</b>		
Wages	\$873.75	\$0.00
Personal Allowance	n/a	\$190.00
Shelter Allowance	n/a	\$600.00
Childcare Allowance*	n/a	\$327.75
Child Tax Benefit	\$564.15	\$564.15
GST/HST Credit	\$57.83	\$57.83
<b>Total</b>	<b>\$1,495.73</b>	<b>\$1,739.73</b>
<b>Basic Monthly Expenses</b>		
Shelter	\$523.32	\$523.32
Power/heat/water	\$129.55	\$129.55
Telephone	\$23.00	\$23.00
Transportation	\$321.01	\$321.01
Childcare**	\$327.75	\$327.75
Clothing, footwear, etc.	\$158.76	\$158.76
Funds remaining for food	<b>\$12.34</b>	<b>\$256.34</b>
Cost of the NNFB	<b>(\$386.18)</b>	<b>(\$386.18)</b>
Funds remaining for other expenses	<b>(\$373.84)</b>	<b>(\$129.84)</b>

*\*The Mom receiving IA needs to be involved in looking for work so she can qualify for up to \$400/month childcare allowance.<sup>10</sup>(Guide to ESIA)*

*\*\* Childcare expense is based on \$279/month for "Excel" program for the 7 year old, and a full time subsidized daycare space for the 4 year old, at \$2.25/day.<sup>11</sup> (Childcare Subsidy and Excel Childcare Program)*

*Note: Mom is "in the red" even with a subsidized day care space and after-school "Excel" program.*

## Family of Three - Female Lone Parent (attending university) with 2 children

**Table 4** presents the potential financial impact of purchasing the NNFB for a lone mother of two children who is attending university. Of all the scenarios, this family has the worst financial situation - **potentially in debt each month by almost \$500.**

Over the past 15 years, tuition rates in Nova Scotia have increased dramatically, resulting in some of the highest tuition rates in Canada. According to the Statistics Canada "Tuition and Living Accommodation Costs" (TLAC) survey, the average annual cost of an under-graduate program in Nova Scotia is \$6,281 compared to the national average of \$4,214.<sup>13</sup> Recent research indicates that in 2004, there were 51 Campus Food Banks in Canada; and that in Nova Scotia, seven of the eleven post-secondary institutions have campus food banks to help provide food to students who cannot afford to purchase their own.<sup>14</sup>

**Table 4 - Female lone parent family (attending university), 2 children**

Family Composition	Single Female (24y) (Boy 7, Girl 4)
Source of Income	Student Loan
<b>Monthly Net Income</b>	
Canada & NS Student Loan	\$1,530.00
Canada Study Grant	\$170.00
Child Tax Benefit	\$564.15
GST/HST Credit	\$57.83
<b>Total</b>	<b>\$2,321.98</b>
<b>Basic Monthly Expenses</b>	
Full-time University Tuition	\$785.13
Textbook/supplies	\$162.50
Shelter	\$523.32
Power/heat/water	\$129.55
Telephone	\$23.00
Transportation	\$321.01
Childcare*	\$327.75
Clothing, footwear, etc.	\$158.76
Funds remaining for food	<b>(\$109.04)</b>
Cost of the NNFB	<b>(\$386.18)</b>
Funds remaining for other expenses	<b>(\$495.22)</b>

*Note: If this Mom were receiving a student loan AND IA, she may be more able to afford a basic nutritious diet. However, since 2001, IA recipients can receive support only for participation in community college programs, and not for university attendance.<sup>10</sup>(Guide to ESIA)*

*\*Child care expense in this case assumes a subsidized space for the 4 year old daughter and an "Excel" after-school program for the son (as in Table 3), although there is no guarantee that either of these will be available for this family.<sup>11</sup>  
(Childcare Subsidy and Excel Childcare Program)*

## Family of One - Single Adult Male with no children

The monthly cost of the NNFB in 2004/05 for a 30 year old male was \$213.66/month. After the cost of a basic nutritious diet is factored in, the single male with a full time minimum wage job would be left with **just over \$100/month to cover all other potential expenses.**

Although slightly better off than families in the scenarios examined previously, a single male receiving Income Assistance still would not be able to purchase the NNFB, or have any money to spare for items such as personal hygiene products, household and laundry cleaners, prescriptions, costs associated with physical activities, education or savings for unexpected expenses.

**Table 5 - Single adult male, no children**

Family Composition	Single Male (30 years)	Single Male (30 years)
Source of Income	Minimum Wage (FT)	Income Assistance
<b>Monthly Net Income</b>		
Wages	\$873.75	\$0.00
Personal Allowance	n/a	\$190.00
Shelter Allowance	n/a	\$285.00
GST/HST Credit	\$28.92	\$18.92
<b>Total</b>	<b>\$902.67</b>	<b>\$493.92</b>
<b>Basic Monthly Expenses</b>		
Shelter	\$307.84	\$307.84
Power/heat/water	\$80.97	\$80.97
Telephone	\$23.00	\$23.00
Transportation	\$75.36	\$75.36
Childcare	\$0.00	\$0.00
Clothing, footwear, etc.	\$92.90	\$92.90
Funds remaining for food	<b>\$322.60</b>	<b>(\$86.15)</b>
Cost of the NNFB	<b>\$213.66</b>	<b>(\$213.66)</b>
Funds remaining for other expenses	<b>\$108.94</b>	<b>(\$299.81)</b>

*Note: The single male in receipt of Income Assistance may qualify for an additional \$150/month in a transportation subsidy while looking for work.<sup>10</sup>(Guide to ESIA)*

*Even with this added help, he still cannot afford to eat nutritiously.*

## Does the cost of purchasing a nutritious diet differ between large and small stores?



Smaller Grocery  
Stores =  
\$632.40/month for  
family of four



Mega/superstores =  
\$606.20/month for  
family of four

**The average monthly cost of purchasing a nutritious diet for a family of four was significantly lower at mega store/superstores, as compared to smaller grocery stores.**

For the purposes of this research, stores smaller than 15,000 square feet were classified as "smaller stores" and those over 15,000 square feet were considered larger.

### Policy Implications of Food Costing

The aim of the Nova Scotian food costing projects is to gather evidence that can be used to build food security in our province. **Food security** exists when all people, at all times, have access to nutritious, safe, personally acceptable and culturally appropriate foods, produced and distributed in ways that are environmentally sound and socially just.<sup>15</sup>

By calculating the affordability scenarios found above, it is clear that single mothers and their children, post-secondary students, workers earning minimum wage, and individuals receiving Income Assistance are among those unable to consistently afford a basic nutritious diet. The NNFB costs slightly more in rural areas, and slightly less at larger grocery stores, which means those outside of urban areas may pay more for a nutritious diet. Research indicates that food insecurity can cause many problems, including nutritional deficiencies that may lead to physical, mental, and social complications - not only for those individuals experiencing food insecurity but also for communities and our province as a whole.<sup>16,7,17</sup> It is clear that Nova Scotians need to act on the results of this research to work together for change.

Based on the 2004/05 data, many families in Nova Scotia still cannot afford to eat nutritiously. For those families relying on minimum wage and Income Assistance, current rates do not cover the full costs of a nutritious diet or other basic needs, and therefore may pose a significant risk to health. These findings support the need for a review of policies of minimum wage and Income Assistance rates in Nova Scotia. In the spirit of this participatory research, Nova Scotians need to act on the results of this research to work together for change.

The final report for the 2004/05 data will be available later in the summer, 2006. For more information on these findings and other work being done in Nova Scotia to support food security, please visit [www.nsn.ca](http://www.nsn.ca) and [www.ahprc.dal.ca/publications](http://www.ahprc.dal.ca/publications).

### What has been accomplished?

Many groups and individuals have been dedicated to building food security in Nova Scotia. Through this commitment, many important strides have been taken to achieve the overall goal of food security for all in Nova Scotia. Some of these accomplishments include:

- Inclusion of food security as one of the four priority areas of Healthy Eating Nova Scotia;<sup>18</sup>
- Creation of a workbook *Thought about Food? A Workbook on Food Security and Influencing Policy* and accompanying DVD that allows communities to identify root causes and sustainable solutions to food insecurity<sup>19</sup>
- Community dialogues have been held around Nova Scotia to discuss the issue of food insecurity and how communities can address the issue;
- Local food security action groups have been formed in several communities to look at the root causes of food insecurity. Some of these groups have started community gardens and kitchens while others have identified problem policies within their areas and have met with politicians to discuss their concerns.



## Next Steps...

AHPRC, FRC/Ps and NSNC want to thank all individuals and organizations who have contributed to the food costing projects. Through combined efforts, we will continue to build capacity at the community level, among those most affected by food insecurity. By working together, we can provide ongoing evidence to inform decision-making to foster the growth and development of food security in Nova Scotia.

*For more information on how you can help to build food security in Nova Scotia there are useful resources on the following websites:*

[www.nsnsc.ca](http://www.nsnsc.ca)

[www.ahprc.dal.ca](http://www.ahprc.dal.ca)

[www.foodthoughtful.ca](http://www.foodthoughtful.ca)

*Together we can make a difference!*

### Our Partners

Thanks to the partners of the Nova Scotia Food Security Projects: The Nova Scotia Nutrition Council, Atlantic Health Promotion Research Centre (Dalhousie University), Collaborating Family Resource Centres/Projects of Nova Scotia, the Ecology Action Centre, the Atlantic Canadian Organic Regional Network, and the Departments of Nova Scotia Health Promotion and Protection, Community Services and Agriculture, Public Health Services in all Districts throughout Nova Scotia and Acadia and St. FX Universities. Thanks also to the members of the food costing working group, provincial steering committee, and especially to all the dedicated food costers and support people throughout NS. We are grateful to Nova Scotia Health Promotion and Protection for funding this project.

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