

A Canada Food Day “Chicken Picnic” Story

From \$13.00 to \$50.00+

What are you willing to pay for?

Erna van Duren and Julia Christensen-Hughes

School of Hospitality and Tourism Management

College of Management Economics

University of Guelph

Discussion Paper #1

August 1, 2013

Our discussion papers aim to stimulate informed discussion among readers who are interested in issues of importance to “leaders for a sustainable world”.

Paper available at www.uoguelph.ca/htm

A Canada Food Day “Chicken Picnic” Story

From \$13.00 to \$50.00+ – What are you willing to pay for?

Erna van Duren, Julia Christensen Hughes ¹

Introduction

In the spirit Food Day Canada’s call for Canadians to celebrate all that is good about Canadian food and share their stories, we present a “chicken picnic” story. We wondered to what extent such a picnic might still be considered affordable; what would be the cost of a basic meal and what would be the cost if you prefer to eat local or organic foods, or have a food sensitivity or allergy?

The chicken picnic we created was for four people, two adults and two children, living in the Guelph area, during July 2013. This region of Ontario is blessed with some of the best farmers’ markets in North America, an abundance of food retailers of all types and a diversity of informed and demanding consumers. Home to the University of Guelph – Canada’s Food University - it is truly one of the best places in Canada to live, whether you are a “foodie”, a single-parent struggling to put decent meals on the table, or someone who is just becoming interested in the food system.

Studies have shown that worldwide, food prices increased by over 35% from 2007 to 2012. With an increase of just 19% during this same period, Canadians spend a lower percentage of their income on food than people in all but three other countries (the U.S., the U.K. and Singapore). Regardless, putting good food on the table has become increasingly challenging for many Canadians, particularly for those whose incomes have not kept pace with inflation. In 2011, more than 12% of Canadians experienced some level of food insecurity² and many other Canadians began to watch their grocery expenditures much more closely.

A Chicken Picnic

The items we chose for our picnic basket reflect the preferences of Canadian consumers and included chicken, milk, bread rolls, romaine lettuce, tomatoes, cucumbers, potatoes,

¹ *Research assistance provided by Rowan Hayward and Jordan Silver.*

² See Tarasuk, V. et al “Household Food Insecurity in Canada, 2011”

cherries and either mayonnaise or whipped salad dressing. Chicken has become Canada's meat of choice; we consumed nearly 32 kg/person in 2011 compared to 27 kg of beef and 26 kg of pork.³ Consistent with the intention of Canada Food Day, most of the products in our basket were fresh or chilled. The only processed products were the salad dressing and mayonnaise, and the chicken and salads from the restaurants. We visited five grocery stores, three markets, four specialty retailers and three restaurants with popular take-out options (and added the milk and cherries from the lowest priced sources). To make the costs of the chicken picnic comparable we used Canada's Food Guide to create a meal that would meet the protein, fruit and vegetable requirements for two adults and two children for a day, about half of their dairy requirements and just under one-quarter of the suggested servings of grain products.



Photo of our chicken picnic taken by Jordan Silver

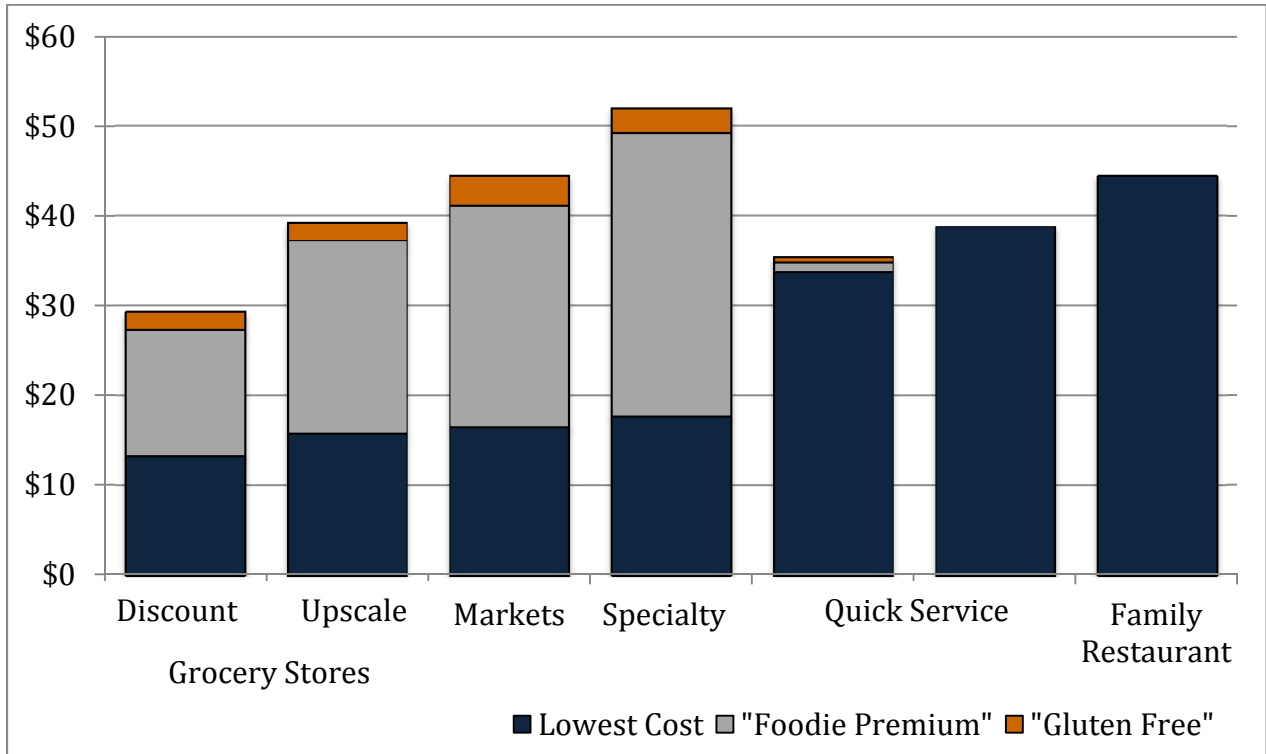
The Cost of the Picnic

The cost of the food for our chicken picnic ranged from a low of \$13.33 at one of Guelph's discount grocery stores to a high of \$49.29 when premium ingredients were picked. Substituting the lowest priced gluten free product for regular bread rolls further increased the lowest cost option to \$15.40, while substituting the highest priced gluten free bread roll

³ These weights are based on the raw, uncooked meat in all its forms

further increased the highest cost option to \$ 52.01. The cost of the restaurant meals ranged from \$33.80 to \$44.49 (including tax).

Figure 1: Cost Comparison



Note: The chicken picnic contains 8 servings of chicken (at 75 grams each), 1 litre of milk, 4 cups of romaine lettuce, 1 cup of tomatoes, just under 2 cups of cucumbers, just under 3 cups of potatoes, just under 4 cups of cherries, 5 bread rolls of 35 grams each and 7 tablespoons of added fats and oils in the form of mayonnaise or whipped salad dressing.

Figure 1 contains the cost comparisons. The lowest cost at each of the retail options, represented by the dark blue portion of the bar is the “commodity version” of the picnic basket, which included basic food in its most cost-effective form. For example, this meant buying a whole chicken and not chicken breasts, a 4 litre bag of milk and not the 1 litre carton, a 5 to 10 lb. bag of potatoes and not mini potatoes, and a bulk bag of regular whole-wheat rolls and not the gluten-free option. This represents the cost at which Ontario’s food system can deliver fresh, whole, non-differentiated food products to consumers in Guelph.⁴

⁴ We used only fresh and chilled chicken and excluded frozen chicken pieces in bags or boxes, which can often be purchased more cost effectively than fresh or chilled chicken, but may also have undergone processing that results in added ingredients to flavour and plump-up the product for cooking.

The light grey portion of each bar represents the “differentiation” or “foodie premium”. This reflects the extra costs some consumers are willing to pay for premium products including free-range organic chicken, new potatoes in meal size packaging, vine ripened tomatoes, cucumbers without blemishes, organic milk or regular milk in smaller packages and the many other ways that food products are increasingly being packaged and branded by the food industry.

We collected over 250 prices and within those prices we identified nearly 100 brands and packaging options. All of this variation for just 10 products demonstrates the marketing activity associated with food today, resulting in a price increase of between 105 and 136% at the grocery stores in our sample, 150% at farmers markets and 178% at specialty retailers. This “differentiation premium” was found to be lowest at a “value bannered” grocery store in one of Guelph’s lowest income neighborhoods (easily accessible by bus for low-income shoppers) and highest amongst the specialty retailers dispersed throughout the city.

The differentiation premium at the farmers markets we visited was found to be in the mid-range between that charged by the highest cost grocery store and the specialty retailers. Spending a Saturday morning going to a farmers market can result in some good buys, particularly buying local and in bulk, but it can also result in premium prices. In this case, the premium may be as much about the experience as the food being purchased.

What about the cost of local food?

Identifying what exactly constitutes “local food” can be challenging. In this study, if the product was not specifically labeled “local”, we used “made in Canada” as a reasonable substitution. We found that generally, for the foods in our chicken picnic, the more “local” or closer geographically the food’s source, the lower the cost. But there were interesting exceptions. The vegetables in our picnic were generally priced the same as the lowest cost imports with the exception of tomatoes, for which imported product was generally priced somewhat lower. For the other vegetables, the “local” discount was highest for cucumbers, followed by romaine lettuce, cherries and potatoes. However, if purchasing an organic vegetable, the price difference between “local” and imported became quite variable.

The chicken and milk items in our picnic are generally considered “supply managed” commodities. Last year, Canada imported almost no fluid milk, so it is very unlikely that any milk in our basket would not have been a Canadian or local product.

Chicken is also supply-managed, however, due to various trade agreements, increasing amounts of chicken are being imported each year, particularly from the US, as well as from Brazil, Thailand and Chile (and last year from China). Most imported chicken ends up being further processed for convenience foods and restaurant portions but may also be sold in fresh, chilled form. In one Guelph grocery store shoppers are advised that their chicken is generally Canadian sourced; “we always source from Canada when available”. In 2010 over 500 Canadian companies had chicken import quota. If you want to ensure you are eating local (and this is possible on a budget), it is best to buy chilled whole chickens, ask the butcher about sourcing, or purchase directly from a local farmer.

What about organic food?

Not one of the retail outlets we visited provided all the foods in our picnic basket from verifiable organic sources, even when we excluded the mayonnaise or whipped salad dressing and substituted a gluten free bun for a regular roll. Chicken is the most established organic category, and organic, grain-fed, free-run products were relatively easy to find. Chicken also carried the lowest organic price premium of the foods in our picnic basket. Quite interestingly, buying organic milk in a 4 litre bag was in some instances cheaper than buying regular milk in a 1 litre carton. Often the certified organic version of a food product was imported; from Mexico, the west coast of the United States and occasionally from overseas. This creates an interesting dilemma for some consumers: whether to buy local or organic.

What about Gluten Free Foods?

Many more gluten free options have become available in the last few years at both grocery stores and restaurants alike. That said, obtaining gluten-free bread rolls took some work. Only one of the grocery stores, of the five we visited, carried gluten-free rolls. The specialty store prices for gluten free products were lower than the grocery stores and markets that offered this type of product.

The Convenience Factor

We also visited three restaurants in Guelph that offer ready-to-eat chicken products and salads. We further added cherries from a road-side stand, milk from the 4 litre bag at home and buns from a local grocery store if those were not included in the restaurant’s product line-up. The costs of purchasing a chicken picnic from a fast food, quick-service and full service family restaurant varied from \$33.80 to \$38.85 to \$44.49 respectively. The

premium paid for the convenience of not having to cook the chicken or prepare the salads (estimated to take about 1 hour and 40 minutes) ranged from \$20.47 to a high of \$31.14 when compared with the lowest cost grocery store option. The “convenience premium” was considerably less for a chicken picnic with more “differentiated” products. In fact, the restaurant-prepared meals in some instances cost less than buying and preparing a picnic involving premium products.

The Food Tourism Factor

Many visitors to Guelph visit one or more of the many farmer’s markets in the region. The St. Jacob’s Farmers Market is considered a top tourism destination within the area and provides a vibrant cultural experience with its mix of Old Order Mennonite vendors and a variety of fresh and prepared foods. For many consumers in the Guelph and Kitchener-Waterloo area, a visit to St. Jacobs is considered “food tourism” at its best.

We priced our picnic basket using products from four markets and roadside stands. Here we found that the cost of our chicken picnic was about \$2.00 higher than at the lowest cost grocery store. This price differential also does not take into consideration the cost of time or travel, which can be substantial. However, this is a cost many are willing to pay for both the experience and the opportunity to purchase products directly from farmers. However, even these products are not always “local”. One scan with a Blackberry of a product code during our investigation confirmed that one Mennonite vendor’s cherries had travelled from a farm in Washington State. While they may have been organic and sustainably grown (as advertised), they were also imported.

The Nutrition Factor

Assessing the nutritional value of a meal is not as straightforward as many of the websites and apps available for this task suggest. For example, the nutritional value of a chicken will vary depending on whether it is an oven roasted whole chicken, a grilled chicken breast or a pan-fried thigh. Similarly, potatoes can be oven-roasted, boiled and mashed, or boiled and cubed into a salad with a dressing. Home-made salads can be more easily standardized for nutritional comparison, but even different types of lettuce have different nutritional profiles.

To help address this confusion, we used the U.S. Department of Agriculture’s Nutrition database as well as Canada’s Food Guide. As a result, our picnic basket contains all servings of meat recommended for a family for a day, all of its fruit and vegetable needs, about half of its milk and dairy needs and just under one-quarter of its grain product needs. As well, we assumed that about 75% of the fats and oil for a day could be used.

We found a considerable range in the nutritional make-up of our chicken picnic. The calories in our restaurant meals ranged from a low of just over 3,000 for the rotisserie take-out meal (that had a smaller amount of chicken and less salad) to nearly 5,000 for the fried chicken take-out that included fries (for our potato option) and two medium-sized salads. For the home cooked meal the variation in total calories was quite a bit less; ranging from a low of 3,378 to a high of 3,972.

The fat and sodium content was found to vary much more than the protein and carbohydrates across our restaurant meals. However, the nutritional composition of the home-cooked meals was also found to depend on how the food was prepared, whether it was a whole chicken with the fat used in a gravy or a breast grilled to maximize the protein count and minimize the fat. Interestingly, for both the whole chicken and chicken breasts, the discount grocery store offered the best nutritional value. Buying fresh foods, and preparing them with less salt and pouring off the fat instead of making gravy (or just not eating it) maximizes the nutritional impact of the consumer food dollar, especially for the lowest priced chicken in the city.

Canada Food Day – A Day Worth Celebrating!

From our study, we found that it is possible to have a nutritious, locally sourced, home-prepared chicken picnic for four, for just over \$13.00. For those seeking convenience, pre-prepared options are available, from between \$33.80 to \$44.49, but consumers should be wary of high sodium levels, particularly with deep fried foods. For those who are willing to pay for organic, free range, convenience packaging, or other premium food attributes, or value the experience of shopping at their local farmers' market, the same meal can cost as much as \$50.00 or more.

Regardless of the option one chooses, we are fortunate to be living in a country with an abundance of food and choice. On Canada Food Day that is worth celebrating!

Appendix 1: Nutritional Makeup Comparison

FOOD				Food Guide Serving (grams)*1					Total (grams)				
	Total	# of Servings	Unit per serving	Calories	Protein	Fat	Carb.	Sodium	Calories	Protein	Fat	Carb.	Sodium
Chicken													
Home Cooked Min	600	8.0	75	86	14	2	0	53	684	110	16	0	420
Home Cooked Max	600	8.0	75	160	16	11	0	87	1278	127	89	1	696
Restaurant Deep Fried	630	8.0	79	184	17	11	5	483	1471	136	86	37	3867
Restaurant Rotisserie	504	6.7	75	158	22	8	0	164	1060	148	54	0	1100
Milk	1,000	4.0	250	125	8	5	12	118	500	33	20	48	470
Roll	175	5.0	35	83	4	1	15	167	417	19	4	77	837
Romaine lettuce	1,000	8.0	125	21	2	0	4	10	170	12	3	33	80
Tomato	250	2.0	125	23	1	0	5	6	45	2	1	10	13
Potato	700	5.6	125	86	2	0	20	20	483	12	1	110	112
Cucumber	475	3.8	125	19	1	0	5	3	71	3	1	17	10
Cherries	950	7.6	125	79	1	0	20	0	599	10	2	152	0
Salad Dressing	105	7.0	15	59	0	5	4	107	410	1	35	25	747
Mayonnaise	105	7.0	15	102	0	11	0	95	714	1	79	1	667
Prepared Side Dishes													
Coleslaw	250	3.3	75	69	1	5	12	430	230	3	15	40	430
Potato	250	3.3	75	90	4	5	5	1,400	300	14	18	15	1,400
Fries	510	6.8	75	284	3	14	35	3,550	1,930	18	97	241	3,550
Baked Potato /with butter	588	7.8	75	74	0	2	12	14	580	0	16	96	112
Caesar Salad /with dressing	280	3.7	75	146	1	0	2	6	540	2	36	16	560
Total Costs *2													
Home, Minimum				580	33	14	84	483	3378	202	81	472	2687
Home, Maximum				654	35	23	84	517	3972	219	154	473	2963
Takeout, Minimum				586	35	16	42	469	3097	202	130	237	3079
Takeout, Maximum				835	36	41	84	6148	4847	223	240	458	10554

Note: *1 Sodium is in milligrams; all other units are in grams or milliliters.

*2 Total costs are for the chicken, potato and salads included in the meal, while bread rolls, milk and cherries are added at the lowest cost unless the bread rolls was included.

Appendix 2: A note on our sample

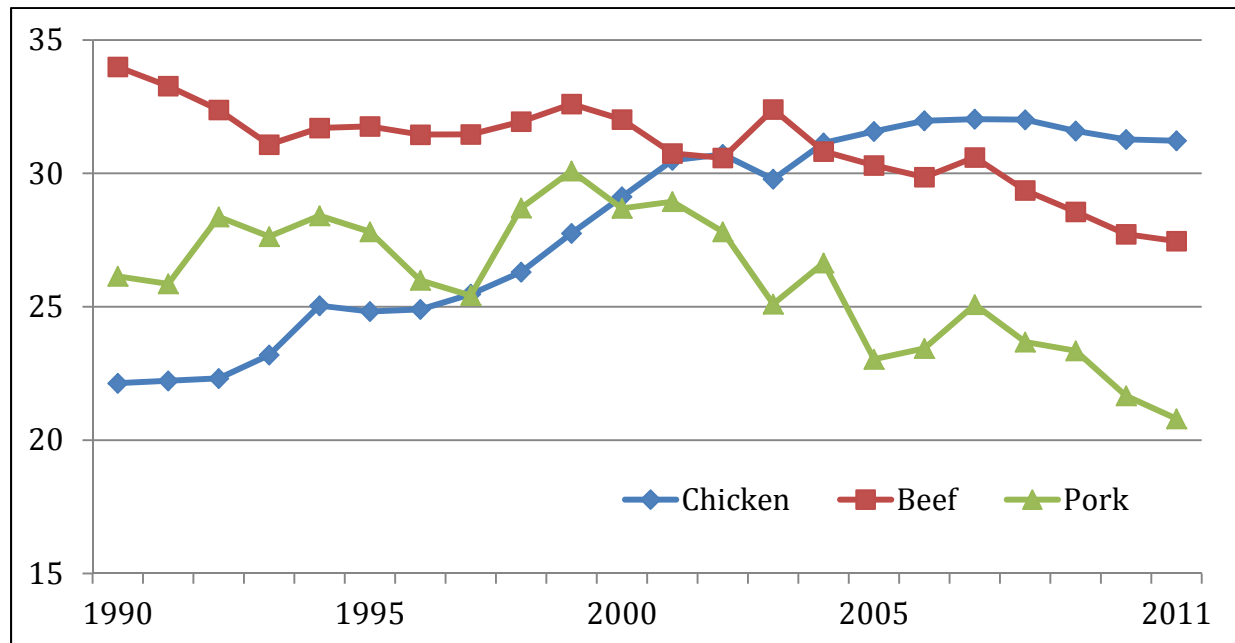
Where did we collect our data?	Type of Retail Outlet			Number of data points
	Grocery	Market	Specialty	
Products				
Chicken	68%	19%	13%	53
Rolls	68%	20%	12%	25
Milk	85%	11%	4%	27
Romaine	54%	21%	25%	24
Cucumber	67%	17%	17%	18
Tomatoes	55%	23%	23%	22
Potatoes	70%	11%	19%	27
Cherries	33%	58%	8%	12
Dressing	100%	0%	0%	11
Mayonnaise	93%	0%	7%	13
				232

- Grocery stores included five up-scale, discount banners and inclusive stores
- All of the grocery stores were easily accessible by bus.
- Markets included three farmers markets and stands in the Guelph and St. Jacobs' areas
- Specialty stores included four retailers specializing in gluten free products, sustainably and ethically raised meat products and premium groceries.

Prices were collected from July 4-7th, except for cherry prices which were collected on July 26 and 27th.

Why Chicken?

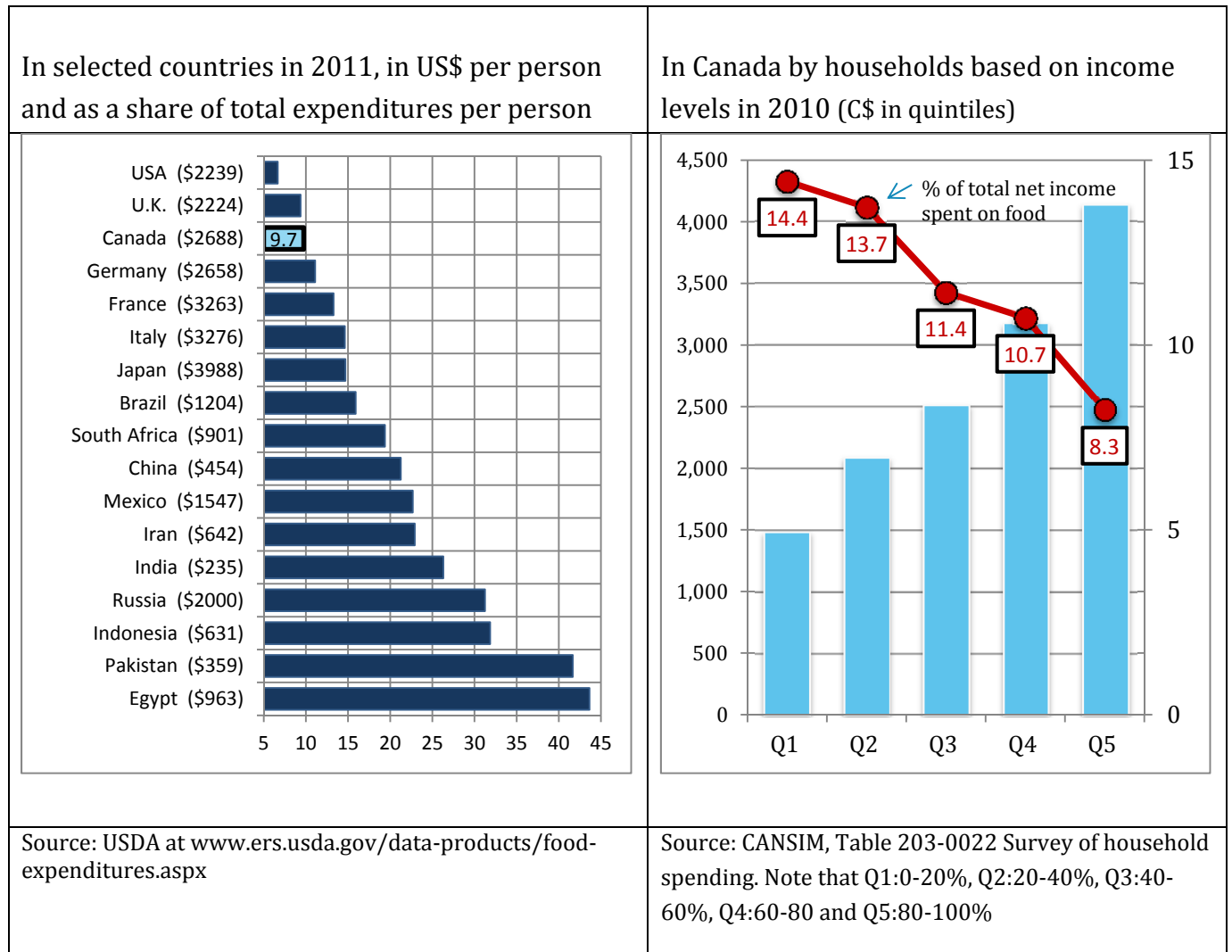
Kilograms of Chicken, Beef and Pork Consumer per Capita in Canada (kilograms, uncooked, using the whole slaughtered animal; using Agriculture and Agrifood Canada data)



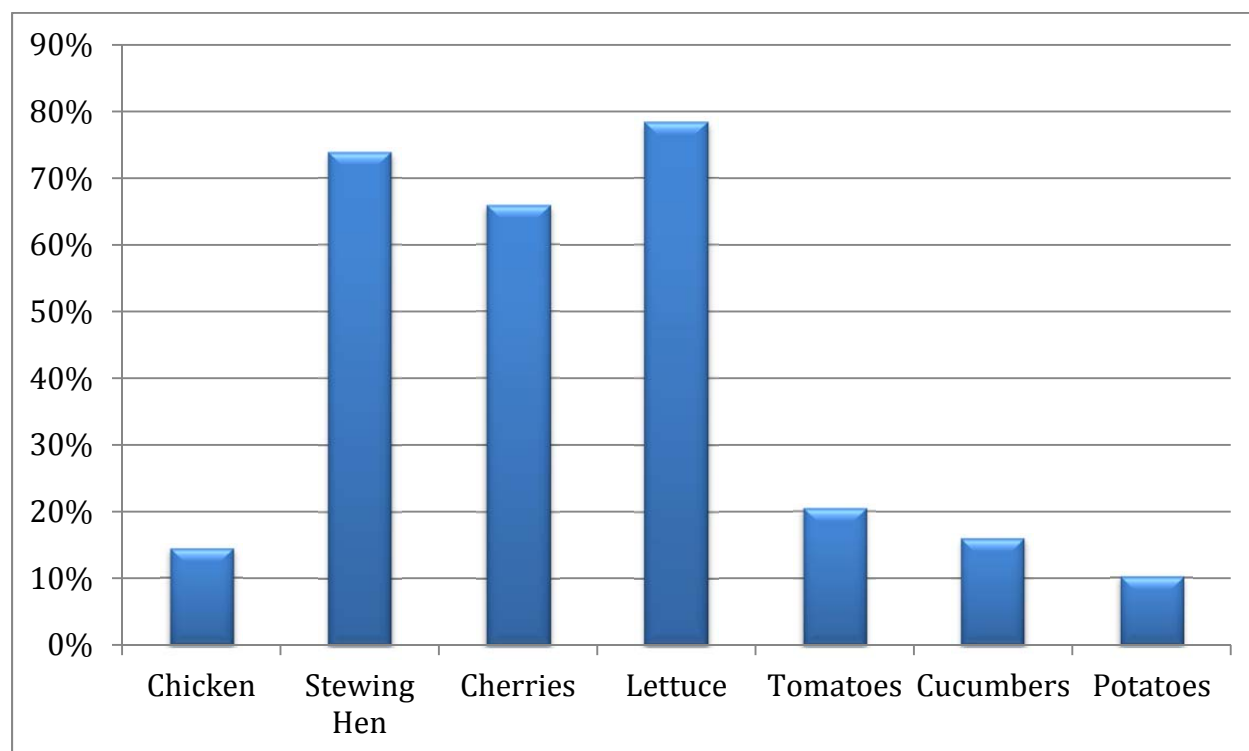
Appendix 3: Food Spending by Income Groups

On average Canadians spend consistently less of their income on food than consumers in any other country with the exception of the U.S., and more recently those in the United Kingdom. In 2011, U.S. consumers spent 6.7% of total expenditures on food, while in the U.K. consumer spent 9.4% and Canadians spent 9.7%. However, this is for Canadians, as an average, and Canadians in lower income groups spend a higher proportion of their total current expenditures on food. The graphs below illustrate this comparison. The left panel depicts Canadian spending on food, per person, relative to a selection of countries, both as a percentage of total expenditures and as the amount per year in US\$ for 2011. The right panel provides comparable Canadian data for 2010, for each income quintile, which breaks households into five groups ranging from the lowest to highest 20%. Note that income and expenditure data in the left and right panels are measured differently and cannot be compared directly.

Annual Spending on Food



Appendix 4: Percentage of Food Products Used in Canada that were imported from 2008-2012 (Average % for 5 Years)



Percentage of Total Imports by Product and Country					
	U.S.	Mexico	Chile	Brazil	Other
Chicken	86%		1%	13%	0%
Cherries	86%		14%		0%
Lettuce	99%	1%			0%
Tomatoes	55%	42%			3%
Cucumbers	21%	73%			6%
Potatoes	100%				0%

Source: Calculations by authors using data accessed at Statistics Canada, Table 002-0010 Supply and disposition of food in Canada and Canada Trade Data Online at www.ic.gc.ca/eic/site/tdo-dcd.nsf/eng/home

Products can be used fresh and for processing.

References:

Agriculture and Agrifood Canada, **Per Capita Poultry Consumption Comparison - CANADA**
http://www.agr.gc.ca/poultry/consm_eng.htm#fn1ref

Brogan, Allison. **Canadians trimming food budgets in face of higher prices, RBC says -- Bank report suggests as much as 91 per cent of Canadians plan to cut back food spending** *CBC News*. May 16, 2013. Accessed at www.cbc.ca/news/lliness/story/2013/05/16/business-rbc-food.html

CBC News Canada **Canadian definition of 'local' food greatly expanded -CFIA interim policy says local food is anything grown within the same province**
May 28, 2013. Available at <http://www.cbc.ca/news/canada/story/2013/05/28/video-local-food-definition-expanded.html>

Fekete, Jason. **Incomes for Canada's middle class stall**. Ottawa Citizen, July 8, 2013, Available at www.ottawacitizen.com/business/money/Incomes+Canada+middle+class+stall/8631588/story.html

Food and Agriculture Organization of the United Nations, **World Food Price Index**, Accessed at www.fao.org/worldfoodsituation/foodpricesindex/en/

Kerr, Josh, **Food prices far outpace consumer price index**. The Globe and Mail. Thursday, Jun. 27 2013, Accessed at www.theglobeandmail.com/report-on-business/economy/food-prices-far-outpace-consumer-price-index/article12873071/

Rollin, Anne-Marie, **The Increase in Food Prices in Canada**, Analytical Paper – Economic Insights, Statistics Canada, 2013. Available at www.statcan.gc.ca/pub/11-626-x/11-626-x2013027-eng.pdf

Statistics Canada. Several sources for **Consumer Prices and Consumer Price Indexes** can be accessed at the site Tables by subject: Consumer price indexes. Available at www.statcan.gc.ca/tables-tableaux/sum-som/101/ind01/13_3956_2178-eng.htm?hili_econ155

Statistics Canada. **Survey of Household Spending**, Information and tables can be accessed at www.statcan.gc.ca/daily-quotidien/130130/dq130130b-eng.htm

Statistics Canada. **Average weekly earnings** (SEPH), unadjusted for seasonal variation, by type of employee for selected industries classified using the North American Industry Classification System (NAICS) Table 281-0026

Stemilt World Famous Fruit, Artisan Organics.
Available at www.stemilt.com/StemiltHome/summer-peaches.cfm

Tarasuk, V, Mitchell A. and Dachner, N. Household Food Insecurity in Canada, PROOF: Research to identify policy options to reduce food insecurity, 2011 Available at <http://nutritionalsciences.lamp.utoronto.ca/>

United States Department of Agriculture, Economic Research Service. **Food Expenditure Series**. Available at www.ers.usda.gov/data-products/food-expenditures.aspx#.UfehBm3mYkw

1 in 8 Canadian homes experienced food insecurity in 2011: report

Read more: <http://www.ctvnews.ca/canada/1-in-8-canadian-homes-experienced-food-insecurity-in-2011-report-1.1390801#ixzz2ad5LUKv4>