

Should we worry about rising cereal prices like we do about oil prices?

In spring 2012, cereal prices began to increase again in global markets, a situation that had many people worried. Would this be a surge like that seen in 2008–2009? Was there reason to worry about a hike in some food prices, the way we worry about gas prices when oil prices go up? On one hand, the two situations are not similar. On the other, we should remember that a rise in global food prices does not have the same effect in Quebec or across Canada as we saw elsewhere in the world in 2008 and 2009. Therefore, it might be wise to wait before getting up in arms.

MEMORIES HAVE A WAY OF FADING..

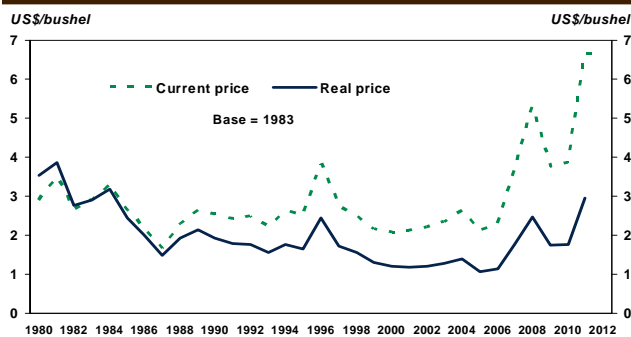
The rise in cereal prices in the world markets in the spring and summer of 2012 revived fears of rapidly increasing food prices. We tend to cry wolf quickly, when there may be no reason to do so.

A look at the last 30 years shows that appreciation by agricultural prices, including cereal prices, is a relatively new phenomenon. We cannot claim that it has hobbled consumers for ages, far from it. Graph 1 presents the movement of corn prices (futures markets' yearly average in U.S. dollars) since the beginning of the 1980s. It shows that prices have advanced very slowly, with acceleration in the 2000s. By taking the overall yearly inflation rate in the United States

into consideration, we see that the real annual price of corn, expressed in early 1980s dollars, has not even reached the level seen in 1980.

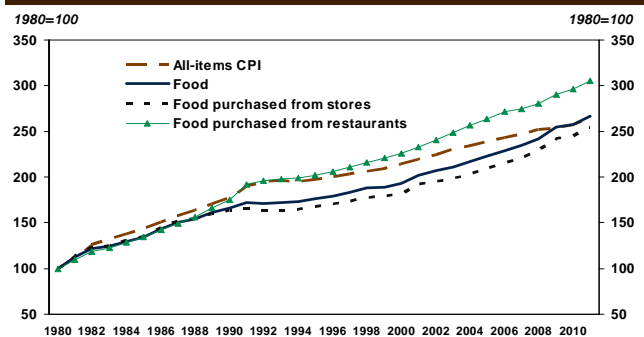
Closer to home for consumers, a look at the same period shows that the Quebec food price index did not grow faster than the all-items price index (graph 2). Since 1980, the index of prices for food purchased in stores has even grown more slowly, though the price index for food purchased in restaurants has grown faster than the total index. There was a rapid climb in the early 1990s, with the introduction of the goods and services tax (GST) in 1991. From 1990 to now, the all-items price index has advanced by 52.5%, while that of food has grown 64.9%.

Graph 1 – Real corn prices are not back to where they were in the early 1980s



Sources: Datastream, Grainwiz and Desjardins, Economic Studies

Graph 2 – The food price index has not shot up in the last 30 years in Quebec



Sources: Statistics Canada and Desjardins, Economic Studies

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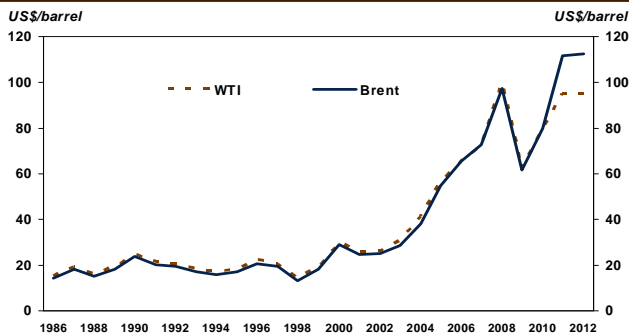
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The rises observed in the 2000s have made us forget that consumers had a long stretch of time during which cereal prices and agricultural prices in general were not a concern for them.

THE 2000S

It is only recently that rising cereal and animal prices made headlines. These increases occurred during an overall boom, when commodities were in high demand. Graphs 3 and 4 are convincing evidence that appetite for raw materials (oil, metals, cereals) had grown enough to cause prices to climb substantially. Demand from emerging nations played a part, of course, but major investors and speculators, interested in commodities as investment vehicles, also pushed prices up.

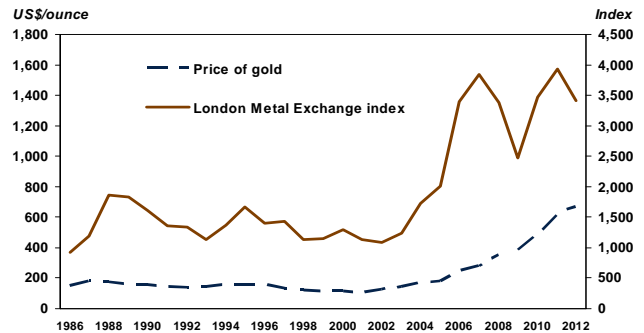
Graph 3 – Oil prices have skyrocketed since 2004



Sources: Datastream and Desjardins, Economic Studies

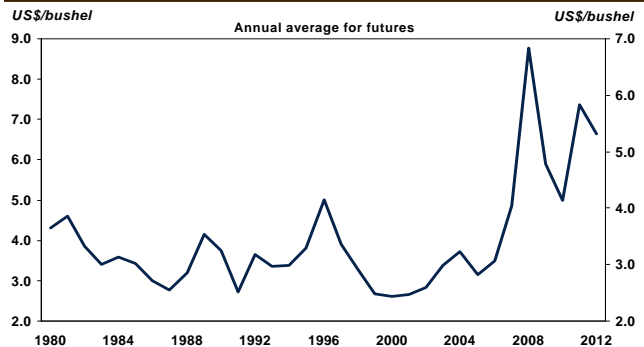
However, these elements alone were not enough to create the meteoric rise by cereal prices observed during 2008 and, more recently, in 2012. Tough weather conditions, which translated into intense episodes of drought or flooding, were reflected in the markets, which saw major price fluctuations. Graphs 1 (page 1), 5 and 6 show how different foodstuff prices rose during the 2000s. There were many blips, but keep in mind that the repercussions were not the same around the world. Pictures of rioters trying to get food in some struggling nations in 2008 and 2009 have left a lasting impression. However, in Quebec, no one was lining up outside grocery stores. This does not mean, however, that a portion of the population did not have problems making ends meet. Despite this, the news that cereal prices were surging in 2012 revived fears of a shortage and escalating prices.

Graph 4 – Gold and metals: A very sharp acceleration by prices early in the last decade



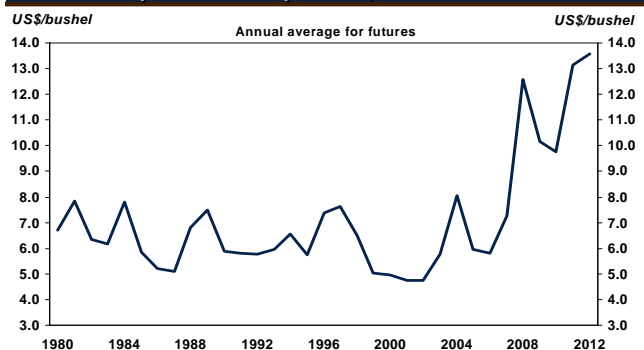
Sources: Datastream and Desjardins, Economic Studies

Graph 5 – Wheat: trend for futures, much faster as of 2007–2008



Sources: Datastream, Grainwiz and Desjardins, Economic Studies

Graph 6 – Soybeans: trend for futures, prices heated up in 2008, 2011 and 2012



Sources: Datastream, Grainwiz and Desjardins, Economic Studies

Table 1 – Portion of household budget devoted to food (excluding alcoholic beverages)

Year	Quebec*	Ontario*	British Columbia	Alberta	Canada*	United States	France**
2002	16.3	13.1	13.6	12.7	13.9	13.2	14.4
2003	16.0	13.1	13.7	12.7	13.9	13.1	14.4
2004	16.0	12.5	13.7	12.7	13.6	13.3	14.1
2005	15.7	12.5	13.3	12.5	13.4	12.8	13.7
2006	15.3	12.5	12.4	11.2	13.0	12.6	13.5
2007	16.1	12.3	13.1	11.3	13.2	12.4	13.3
2008	15.4	12.3	13.4	11.4	13.1	12.8	13.5
2009	15.0	12.1	12.5	11.8	12.8	13.0	13.6
2010***	13.8	12.0	13.0	12.4	12.7	12.7	13.5

* : A number of changes to methodology were introduced when Canada's Survey of Household Spending (SHS) was overhauled.
 ** : All figures for France have been revised based on the changes in the national accounts.

*** : 2010 Note: change in methodology.

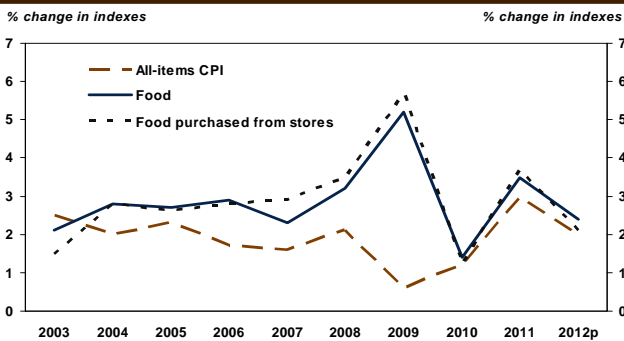
Note: For comparison purposes, the total value of household spending used in the calculation does not include taxes.

Sources: Statistics Canada, Insee, National Accounts - Base 2005, Institut de la Statistique du Québec and Desjardins, Economic Studies

RECENT PRICE INCREASES AND HOUSEHOLD SPENDING

Many have complained about skyrocketing food prices in recent years. However, figures from Statistics Canada on consumer spending show that, in Quebec, food spending's share of total spending decreased gradually over the 2000's (table 1). All the same, this portion is higher than the Canadian average. Even during the years that food prices jumped (2008 and 2009 – graph 7), food spending's share in total expenses did not increase: it even fell. Substitution effects probably played a role: consumers choosing to purchase other products instead of their usual purchases. However, these effects are hard to capture. Furthermore, although 2010 cannot be compared to previous years, as methodological changes were made to the survey, the two years before it were not part of an uptrend.

Graph 7 – In Quebec, the change in price indexes has eased from its 2009 peak

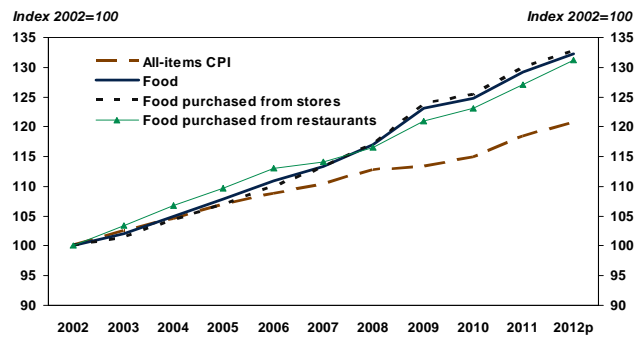


Sources: Statistics Canada and Desjardins, Economic Studies

2002 TO 2012: CHANGES TO FOOD PRICES

From 2002 to 2012, the Quebec food price index rose more quickly than the all-items price index (total CPI) (graph 8). During this time, the total price index went up by nearly 21%. The food price index rose around 32%, with the index for store-food purchases growing approximately 33% and that of restaurant-food purchases, 31%.

Graph 8 – In Quebec, the food price index beat the general price index from 2002 to 2012



Sources: Statistics Canada and Desjardins, Economic Studies

While this appreciation by food prices seems spectacular, note that wheat prices rose 134%, corn increased 200% and soybeans were estimated at 186% (table 2).

Table 2 – Change in some indexes and cereal prices

Quebec price indexes	Change 2002–2012f
CPI	21%
FPI - stores	33%
FPI - restaurants	31%
Annual averages for futures	
Corn	200%
Wheat	134%
Soybeans	186%

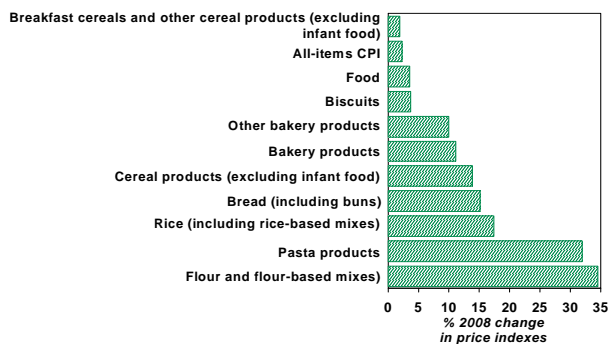
Sources: Statistics Canada, Grainwiz and Desjardins, Economic Studies

WHICH PRODUCTS WENT UP THE MOST?

As we suspected, bakery product prices rose the most quickly, with growth of 52.8% from 2002 to 2012. They are followed by prices for eggs (around 48%), coffee and tea (about 42%), poultry (around 40%), cereal products (around 39%), pork and beef (tied at around 37%), to name those with the most spectacular rises.

As for bakery products, in 2008 alone, prices increased 10.4%, while growth in 2012 stood at around 1.4%. A more detailed analysis, available for Canada (graph 9), shows that flour and flour-based mixes, as well as pasta products, were at the head of the list. Breakfast cereals did not rise as spectacularly, due to the many steps in processing, which considerably reduces the base cereal’s cost on the product as a whole. This will be discussed further in the analysis.

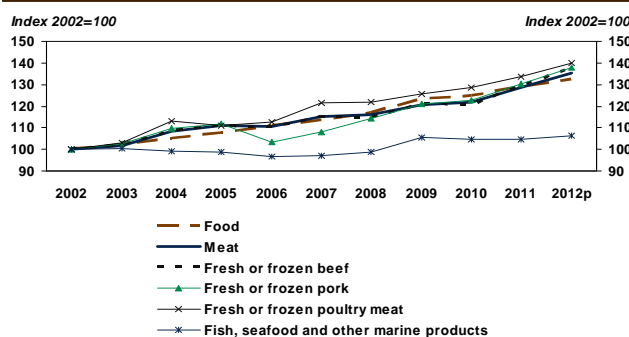
Graph 9 – In Canada, 2008 was a fairly tough year for bakery and cereal products



Sources: Statistics Canada and Desjardins, Economic Studies

From 2002 to 2012, in the meat and fish category, it was poultry prices that rose the most quickly, followed by pork and beef prices (graph 10). Note that fish, seafood and other marine products increased by only around 6%, well below the total price index and food price index. This weak rise is primarily due to the fact that a lot of fish and seafood are imported, and that the Canadian dollar has gone up quickly, going from an average of US\$0.64 in 2002 to parity in 2012. We also assume that the loonie’s rise helped mitigate the effects of rising prices for imported cereals which would otherwise have been even more substantial.

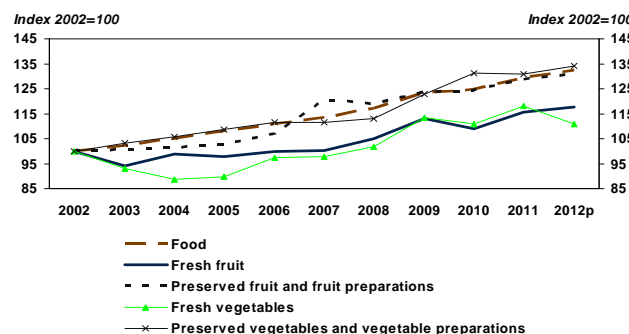
Graph 10 – In the meat and seafood category, poultry prices have gone up the most



Sources: Statistics Canada and Desjardins, Economic Studies

Among those foods whose prices did not cause complaints were fruit and vegetables, especially fresh vegetables (graph 11). There again, the strength of the Canadian dollar played a key part. On the other hand, preserved fruit and vegetables, as well as fruit and vegetable preparations, rose a bit over 30%, due to the greater amount of processing required (especially energy, metal prices for the cans, etc.)

Graph 11 – In Quebec, fresh fruit and vegetable prices are up less than processed fruit and vegetable prices



Sources: Statistics Canada and Desjardins, Economic Studies

THE 2007-2008 EPISODE

An analysis by the Ministère de l'Agriculture, des Pêcheries et de l'Alimentation du Québec (MAPAQ) for the years 2007 to 2008¹ brought some facts to light. Food price increases vary in scope due to a large number of factors, including the number of foods affected, the strength of the loonie and energy costs.

While the Quebec and Canadian food price indexes rose more quickly during those years than the all-items price index, the increase seen was well below the increase recorded in the global foodstuff and food markets.

Several factors can explain this. Firstly, products based on cereals and oilseed make up a small portion of food in Quebec (around 14% in 2007 and 2008). Secondly, Quebecers are very interested in processed food, meaning that the cost of cereals and oilseeds does not affect the total price very much. Finally, as we stated earlier, our dollar's sharp rise has increased our buying power in import markets, reducing the cost of foods coming from abroad.

Note that the MAPAQ study stressed that the "price of some food products in distribution centres had risen enough to trigger a drop in the quantity purchased by consumers" [translation]. Using market data, we also observed that the rise by cereal-based products, especially dried pasta, caused some demand to shift towards couscous and corn meal, which were already growing more popular. However, in 2010, a 9.2% drop by prices was recorded for dried pasta. For cereals, this decrease was 2.1% and for rice, 7.4%.

For meat, the increase in 2007 and 2008 did not seem "extraordinary" compared with the total CPI. It was poultry that was most affected by the increase, given that farming operations are very dependant on cereals for feed. Furthermore, in the case of pork and beef, other phenomena helped keep prices down. During this time, there was an inventory surplus in Quebec pork production. At the same time, the strong Canadian dollar also helped U.S. pork to enter the market, as producers launched a major offensive to conquer the Canadian market. These events combined to keep price hikes in check. As a result, it was hard to raise prices for alternatives like beef.

Finally, MAPAQ's study points out some information that did not make headlines and did not grab attention like rising cereal prices and their repercussions. The in-depth analysis of the figures sheds new light on price increases during the 2000s. Prices for many other products posted their highest growth for the entire decade in 2009. These products include sugar and sweets (11.8%), fresh vegetables (11.4%), fish and seafood (6.6%), coffee, tea and non-alcoholic beverages (8.6%), fresh fruit (7.6%), including bananas (16.7%) and oranges (7.4%), as well as beef (5.5%). These hikes were estimated to have a bigger impact on the cost of Quebecers' "food basket."

Oddly enough, these increases received little attention. For most people, rising food prices were mainly associated with cereal prices.

¹ MAPAQ, *La hausse des prix des denrées agricoles entre 2007 et 2008 n'a eu que des incidences passagères sur les prix des aliments au Québec*, in BioClips+, May 2011, volume 14, issue 1, 8 pages.

DON'T TAKE THESE SHORTCUTS

Rising cereal prices cause alarm because consumers instinctively tend to apply the percentage increases reported in the media to everyday consumer products, such as bread and prepared cereals. This is a shortcut that should be avoided. In fact, according to a 2008 study by Statistics Canada², the rise by commodities such as cereals and oil seeds only affects a small portion of what consumers buy. "For bread and cereals, the most affected by rising grain prices, the cost of commodities represents less than a tenth of what consumers pay for bread, even factoring in energy costs." Analysts take care to mention that "this is the lowest share of any of the major food products."

Using models, the authors carried out several simulations, which revealed that a 10% increase in cereal prices (wheat, barley, corn, and grain for animal feed) caused total consumer prices for food to rise only 0.26%, which is very little. They noted that the largest impact was on poultry (+1.6%) and eggs (+1.0%), which illustrates the link between poultry feed and grains. The increases in breads and breakfast cereals were estimated at 0.3% and 0.6% respectively.

In light of the data collected during the price surge in 2007, and using proven mathematical models, the authors were able to confirm that "services contributed between half and three-quarters of what consumers buy at the grocery store." Here, bread, fruit and vegetables accounted for 60% or more of consumer spending. For fish, dairy products, meat and carbonated beverages, this percentage was closer to 50%. These services included warehousing, transportation, advertising, stocking shelves and corporate profits.

WHEN WE COMPARE OURSELVES...

For our neighbours to the south, the United States Department of Agriculture (USDA) has been working to break down the food dollar for over 15 years. Its latest estimate is from 2010. At that time, the U.S. food dollar was broken down into a dozen categories. The producers' share was around 10¢ on the dollar, while processing's share was 21.7¢, packaging and transportation accounted for 3.9¢ and 3.4¢ respectively, retail trade took 12.8¢, food services 34¢, energy 4.8¢, the financial and insurance sector 5.2¢, and other services (advertising, legal, accounting, etc.) took 4.1¢.

The idea is not to create a numbers war, but to look for similarities. If one can be pinpointed, it is that, based on these two studies, the share going into base materials, whether cereals or meat, is a fairly small part of the cost the North American consumer pays.

THE 2012 EPISODE

In 2012, cereal prices appreciated rapidly, starting in the spring. Grain prices began to climb as soon as it became apparent that the United States was entering a drought, which would compromise a season that was expected to be bountiful. This rapid increase revived the spectre of a possible shortage, and scenarios in which food prices skyrocketed circulated without any real basis in fact. It was believed we would see a repeat of the events of 2008 and 2010, in which cereal prices rose sharply, triggering social upheaval around the world, especially in 2008.

The first analysis of food price indexes in Quebec for 2012 does not reveal a meteoric rise. From January to September of that year, the food price index (FPI) for food purchased in stores went from 132.1 to 131.5, which is a decrease. However, it must be admitted that it reached 134.6 in July. In fact, for the first nine months of 2012, the average FPI rose 2.2%, while this same average increased 3.4% over the first nine months of 2011 from the same period in 2010.

FOOD PRICES: A CONCERN THAT GOES WELL BEYOND QUEBEC

Surging cereal prices and their impact on food prices is an issue that goes well beyond Quebec. The fact that the G-20³ launched a discussion on food prices following the price surge in 2008 is proof of this. A system to monitor global production was implemented to take action to control prices if necessary. Several proposals are being studied, including preventing embargoes on exports. Note that Russia imposed an embargo in summer 2010 following a devastating drought that largely compromised the wheat harvest that season. This action amplified an already substantial rise by cereal prices.

² Statistics Canada, Ziad Ghanem et Philip Cross, *Food prices: A boon for producers, a buffer for consumers*, in the Canadian Economic Observer, June 2008, pp. 3.1 to 3.10, no. 11-010 in the catalogue.

³ The G-20 countries are the G-8 nations plus the European Union, South Africa, Saudi Arabia, Argentina, Australia, Brazil, China, South Korea, India, Indonesia, Mexico and Turkey.

Other suggestions are up for debate, such as putting pressure on U.S. and European authorities to suspend or reduce financial support to biodiesel companies. Another proposal is to tax speculative transactions. These three examples are not the only proposals being considered, but they serve to the concern to restore some calm to the markets in order to prevent overly large fluctuations in foodstuff and food prices.

OUTLOOKS FOR 2013?

It would take a very clever person to accurately predict changes to food prices in the coming year. However, some are trying their luck and making forecasts, including a group of researchers at University of Guelph’s College of Management and Economics. They have been doing this for several years now and their work has yielded an estimated average increase of 1.5% to 3.5% in food prices (all categories combined) in Canada for the year that has just begun. They judge that food prices will rise more than Canada’s inflation rate (the annual change in the consumer price index).

According to their study, several factors are responsible, including meat, whose prices could increase by 6.5% to 8.5%. Smaller herds than previous years are likely to create some scarcity, and thus some pressure on prices. The question that arises is as follows: Has a similar increase been noted in Quebec? The answer is yes. Since 2003, growth like that predicted by the researchers has occurred in Quebec. The first (6.4%) happened in 2004, following an increase of 1.8% the year before. A 5.7% increase was observed in 2011, but it followed weak growth of 0.9% in 2010. Note that meat prices fluctuate wildly from year to year. The outcome for 2012 is as yet uncertain, but should be around 5.0%.

The forecasts for bread, pasta and pastry, which all contain substantial cereal, are between 2.4% and 4.5% for 2013. Though appreciable, even the higher number, 4.5%, is nowhere near 2008’s meteoric rise.

ANOTHER VIEWPOINT

We cannot deny that food prices rose faster in Quebec during the 2000s than they did over the two decades before. However prices did not accelerate at the same speed around the world. This is illustrated by the work of the Economist Intelligence Unit, an independent company that created an index for comparing countries on different levels. With the publication of 2012’s “Global Food Security Index”, the organization showed that, over the last decade, food prices rose three times more quickly than inflation. Fortunately, this was not the case in Canada and Quebec, as evidenced by the figures released by Statistics Canada and previously given in this analysis.

When calculating its index, the research firm used three components. One pertained to affordability. There are many facets to affordability, including the portion of household income spent on food, the proportion of the population living on US\$2 or less per day, GDP per capita, the average tariffs on importing agricultural products, the existence of food assistance programs, and access to financing for agricultural producers (table 3). In the ranking for 105 countries (those for which required information was available), Canada came in 7th in terms of affordability. In terms of the general index, it came in 8th.

Table 3 – Global Food Security Index

Rank	Global index		Affordability	
1	United States	89.5	United States	93.2
2	Denmark	88.1	Switzerland	91.9
3	Norway	88.0	Netherlands	89.4
4	France	86.8	Norway	89.1
5	Netherlands	86.7	Australia	89.0
6	Austria	85.6	Belgium	88.2
7	Switzerland	83,7	Canada	87,9
8	Canada	83,4	Denmark	87,9
9	Finland	83,1	Sweden	87,9
10	Germany	83.0	Austria	87,5
11	New Zealand	82,7	Germany	86,8
12	Belgium	82,2	Finland	86,7
13	Spain	81,2	United Kingdom	84,5
14	Australia	81,1	France	84,4
15	Portugal	80,8	Japan	83,9

Source : Economist Intelligence Unit, *Global Food Security Index 2012*,

This comparison shows that Canada’s situation, which we assume is not too different from Quebec’s, is more desirable than deplorable.

AN INDIRECT PRICE PASSTHROUGH MECHANISM

We have seen it: there is no perfect connection between cereal prices in international markets and the price of food purchased in stores. Prices paid by consumers are determined by a large number of factors. Keep in mind that the more processed a food is, the less the “base material” component figures into the operations that bring it from field to plate.

What’s more, the fluctuating Canadian dollar can affect the rise and fall of prices paid at the cash register. Remember that, for imported foods like fish and seafood, price increases were not as large as the increases in the food price index and the CPI. For some years, the change was even negative.

Other elements can amplify price movements. Production and inventory surpluses can also have an impact. Trade offensives by other producing countries can also shake up pricing. The arrival of new players in the distribution market, like Walmart a few years ago, or Target in 2013, can change supply and sharpen competition, which will keep price increases down.

Keep in mind that increases in the global cereal market do not always have an immediate impact on your grocery bill, and the increase may not necessarily be as big as expected. What’s more, it is very hard to accurately capture the changes consumers will make to adapt to sudden increases in some food prices in order to lessen the effect on their grocery bill.

A look at the data provides some clarity on the issue of cereal and food prices. Firstly, we must acknowledge that food prices have definitely risen in recent years. Secondly, we cannot ignore the fact that, from 2002 to 2012, food prices rose more quickly than the total inflation rate in Quebec. Thirdly, we must also remember that large increases by cereal prices have repercussions for agricultural producers. These difficulties were reported in the media. However, producers’ problems were not the same as those experienced by consumers. Fourthly, the analysis shows that it would be wise to avoid making snap judgements, and that it is not appropriate to apply the price increases seen in world markets directly to the grocery bill.

The answer to the question “Should we worry about rising cereal prices like we do about rising oil prices?” is no. Costs are not passed through in the same way. Analysis of some figures shows that WTI (West Texas Intermediate) oil prices grew 286% between 1990 and 2012, while corn, wheat and soybean prices rose by 160%, 77% and 130% respectively during the same time period. Simultaneously, prices at the pump in Quebec went up 118.4% and the food price index (total) rose by around 65%.

Note that drivers have fairly little leeway when the time comes for a hike. Not everyone can drastically reduce their fuel consumption or change their mode of transportation. On the other hand, the wide range of food products allows for some substitution. It is true, however, that, for people whose spending on food accounts for a larger share of the family budget, higher food prices are harder to cope with.

We don’t yet know what 2013 will hold. Increases in food prices can be expected, but their magnitude is not yet known. One thing is sure: we shouldn’t jump to any hasty conclusions when we see cereal prices go up.

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