## CANADA'S FOOD PRICE REPORT 2017 DALHOUSIE UNIVERSITY





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The Food Price Report 2017 was developed by a research team housed at Dalhousie University, led by the Faculty of Management. Drawing upon expertise from four different Faculties, the Food Price Report is a collaborative effort across multiple disciplines that looks at the economic future of food in Canada.

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### EXECUTIVE SUMMARY

The 7<sup>th</sup> edition of *Canada's Food Price Report* is published for the first time by **Dalhousie University**. 2016 marked Canada's lowest monthly average exchange rate in almost a decade. Food price decreases at retail were both surprising and unexpected. Due to a lower Canadian dollar, vegetable prices soared early in the year which prompted Canadians to become more conscious about food prices in general.<sup>1</sup> In many ways 2016 was a difficult year to predict as weather patterns, the devalued Canadian dollar, a surplus of agricultural and food stocks, and volatile oil prices drove up food prices.

In 2017 food prices are expected to rise above the acceptable inflation rate. The proverbial sweet spot for food inflation is anywhere between 1% and 2% each year. Such a threshold is manageable by all stakeholders and allows the industry to provide higher quality products at an affordable price. Food prices are forecast to **rise between 3% and 5%** in 2017, which is both higher than the previous year's price increase as well as above what is typically considered as acceptable food inflation.

Categories	Expected Price Increases	
Restaurants	2% to 4%	
Dairy and Eggs	0% to 2%	
Fruits and Nuts	3% to 5%	
Bakery and Cereals	0% to 2%	
Meats	4% to 6%	
Vegetables	4% to 6%	
Other Food Items	4% to 6%	
Fish and Seafood	4% to 6%	
Overall Food Expenditures	+3% to +5%	

<sup>1</sup> For more information: Charlebois, S., A. Herian, S. Chamberlain (2016). Pre-shopping habits in food retailing and consumer vulnerability. Working paper, Dalhousie University (31 pages).

For the average Canadian family food expenses in 2017 could increase by **as much as \$420**. The significance of **Donald Trump's** victory in November can not be overlooked. **Dairy and eggs** along with **bakery and cereal** are expected to remain stable and within acceptable inflation rates of 0% to 2%. The same cannot be said for **vegetables, fruits and nuts** which are likely to experience a sharp price rise due to high imported quantities. Vegetables are expected to increase by 4% to 6% and fruit and nuts by 3% to 5%. Deficiencies in the supply chain could be set in motion by **La Nina**, a well-known weather phenomenon which occurs following El Nino. Again, **Northern regions** are likely to feel the brunt of such increases.

**Hog futures** are higher in 2017, which suggests pork prices could go even higher next year. Even though **cattle futures** are expected to remain flat, we anticipate demand will increase and push retail prices higher still. The **fish and seafood** markets are more difficult to evaluate given the obscure nature of contractual arrangements. Nonetheless, we are expecting retail prices at the fish and seafood counter to rise due to increased demand across the country.

Province	Forecasted Change
Newfoundland and Labrador	+
Prince Edward Island	-
Nova Scotia	-
New Brunswick	ŧ
Quebec	ŧ
Ontario	1
Manitoba	+
Saskatchewan	-
Alberta	+
British Columbia	1
Northwest Territories	-

#### Table 2: Food price forecast for 2017 – by province<sup>2</sup>

By assessing the level of competitiveness in food retailing and the state of the overall economy, we are expecting regional differences with food price increases. It is our belief that both **Ontario** and **British Columbia** are likely to experience above average increases in food prices. **Newfoundland and Labrador, New Brunswick, Quebec, Manitoba** and **Alberta** are likely to experience lower than average increases due to a weaker economy and/or a more competitive food distribution landscape.

 <sup>(♠)</sup> Expected above average food price increase, (♣) Expected below average food price increase,
 (–) Expected average food increase.

### 2016: A YEAR OF TWO TALES

#### Accurate Forecast in 2016, 5th time in 6 years

As 2016 ends the irony of **cauliflower** as a luxury item is replaced by the sobering news of steep increases in the usage of **food banks** across Canada. Over 300,000 children and 550,000 adults were helped by food banks in all 10 provinces, with 8 provinces showing increases in visits from the previous year, mostly in **Alberta** and **Nova Scotia**. Some reports suggest that recent increases in visits at food banks have been attributed to **Syrian refugees**, who without many resources must rely on welfare-type benefits as they begin the process of rebuilding their lives in Canada. But even with the Syrian influx, refugees only account for a marginal percentage of the 850,000 consumers requesting assistance. Further research reveals that almost 75% of food bank visitors can secure market-rate housing through rent or a path to home ownership but are forced to choose between high housing costs and food, which has become an increasing problem in many developed countries like Canada.

### 66 Without any government support, food banks are one of humanity's greatest achievements, from a food security perspective."

Without any government support, food banks are a miracle of the human spirit. The socioeconomic role of food banks in Canada should be recognized and how we define who is best served by them should not be overly simplified. Based on the evidence collected thus far, the correlation between food prices and food bank traffic appears to be weak, at best.

### 66 Many of the discount requests made by grocers to vendors went public, which is unprecedented in Canada."

Our 2016 forecast was accurate, for the most part, until deflationary pressures reached Canada in August. Higher than expected inventories for many food products, higher **agricultural outputs** and more pressure imposed on processors by distributors led to lower food prices compared to last year. Canada joined a large group of mature economies experiencing food deflation late this year. The fact that grocers adopted a defensive strategy against food deflation only accelerated the process and prompted prices to drop further. Loblaw, Sobeys, Metro and several other food distributors submitted unilateral requests to their vendors to lower prices at wholesale, from anywhere between a freeze of prices to a discount of 1.45%. Many of the discounts made by grocers went to vendors, which is unprecedented in Canada. **Aggressive discounting** measures were most likely triggered by Loblaw this year, but were followed quickly by many others. Since then, food prices have dropped steadily at a spectacular rate, by 0.5% to 1% a month.

### 66 We have not reached the point of a food price war in Canada, like in the United States, but we are getting closer."

The public nature of grocers' request to vendors this year can likely be explained by the will to make our food supply chain more transparent and accountable. With discussions related to food inflation in recent years, grocers likely felt the need to position themselves as the consumer's protector. Thus, we have not reached the point of a **food price war** in Canada, like in the United States, but we are getting closer.

Category	Expected in 2016 (December 2015)	Actual (from January to October 2016)
Restaurants	1.5% – 2.5%	2.4%
Dairy and Eggs	0.0% - 2.0%	-0.5%
Fruit and Nuts	2.5% - 4.5%	3.4%
Bakery and Cereal	0.0% - 2.0%	0.3%
Meat	2.5% - 4.5%	0.7%
Vegetables	2.0% - 4.0%	4.5%
Fish and Seafood	1.0% - 3.0%	3.8%
Overall Food Expenditure	+2.0% - +4.0%	1.8%

#### Table 3: Summary of 2016 food price predictions

It is important to note that *Canada's Food Price Report* for this year utilizes data generated during the time 1999 to 2016. Given that 2016 is not yet complete, a year to date average of the data from January 2016 to October 2016 was used in place of the actual 2016 figure. We felt the 10-month average provided the best alternative to excluding the 2016 data from the total dataset. With only 2 months missing from the 2016 data, it is unlikely that

any fluctuations in food prices at the end of the year will severely distort the comparisons made to data from previous years and the forecasts for 2017. **The 10-month average indicates that food prices have increased at a far less significant rate than in 2015 and though prices may not actually be lower than they were in 2015, on average Canadians shoppers should have experienced noticeable relief in 2016.** Monthly food prices are expected to remain low in November and December but the average food prices in 2016 will remain elevated due to price fluctuations from earlier in the year. As with previous years, any observed changes to the data, which significantly affect the 2017 forecasts will be reported in an amendment to the original Food Price Report 2017.<sup>3</sup>

#### **The Great Cauliflower Controversy**

*In Canada, the* **8-Dollar cauliflower** shows the pain of falling oil prices, was the title of the New York Times article in January 2016, which highlighted how low commodity prices coupled with a devalued Canadian dollar and deficiencies in the supply chain could culminate in exorbitant food prices for Canadian shoppers. The perceived vulnerability of Canadian shoppers this year was enhanced because of fluctuating food prices.<sup>4</sup> The strong link between the prices of commodities like oil and the value of the Canadian dollar were the likely culprits as low oil prices drove down the value of the Canadian dollar, which further diminished Canadian purchasing power in foreign markets. During the winter months the dollar fell to its lowest rate in a decade, down to 70 cents USD, when only three years earlier, both currencies traded as near equals. This was further worsened by the continuing 4-year drought in **California**, a significant produce supplier for the Canadian market.

### There is evidence that Canadian consumers have generally felt more vulnerable in 2016 because of fluctuating food prices."

Shoppers were spared any further injury as prices returned quickly to more reasonable rates later in the year. This was likely due to efforts by grocers to absorb and redistribute the excess cost.

<sup>3</sup> For more information about our methodology, please read *Canada's Food Price Report: Supplementary File.* 

<sup>4</sup> Charlebois, S., A. Herian, S. Chamberlain (2016). Pre-shopping habits in food retailing and consumer vulnerability. Working paper, Dalhousie University (31 pages).

#### **The Trump Effect**

Internationally, most were surprised by the **"Brexit"** and expected food prices in Britain to rise exponentially, months following the vote. They did not. This surprise was surpassed by another surprise: The election of **Donald Trump** in November. His campaign and rhetoric on immigration, trade and security could influence food prices both sides of the border even though not much was said about agriculture or food policies during the lengthy electoral process.

In fact, the "Trump effect" could increase the cost of our food over the next few years. With food prices dropping in recent weeks in Canada, this could be welcome news for the industry, but not so much for budget-conscious consumers.

66 It is unclear how policies will take shape under a new Farm Bill with a Trump-Pence administration, but it is easy to assume that American farmers will be great beneficiaries."

With the Trump-Pence administration farm labour could be a challenge as it could generate headwinds for agriculture in the U.S. More than 66,000 temporary agricultural workers with visas enter the United States every fiscal year – not a significant amount. However, U.S. agriculture has an estimated 2 million **illegal workers** helping farming operations throughout the year and during harvest. Without such support, U.S. production levels will be negatively affected and could push prices higher. Also, up for debate is the next **Farm Bill**, which will of course be written by the Trump-Pence administration. The Farm Bill is an American law but its influence is often far-reaching. It is unclear how policies will take shape under a new Farm Bill under the Trump-Pence administration, but it is easy to assume that American farmers will be great beneficiaries. We could see subsidies driving commodity prices higher for a while. Just like the Bush administration before him, Trump has an interest in ethanol and we all remember what happened to food prices when oil was over **\$140 per barrel**.

### 2017: DRIVERS OF CANADA FOOD PRICES

Each year *Canada's Food Price Report* examines several key drivers that are likely to impact food prices in the upcoming year. To better identify and assess these fundamental drivers, information is catalogued from the most recent food-related news articles and data from respected international organizations including Statistics Canada, the World Bank, United Nations, European Union, Food and Agriculture Organization and the International Monetary Fund.

Table 4 outlines the impact, effect on price, and the likelihood for each driver. Drivers are either **Macro**, which refers to drivers not directly related to food but whose effects are experienced globally and affect food prices indirectly, **Sectorial**, which is generally associated with national and regional industry-related drivers or **Domestic**, which represent national drivers that primarily affect the Canadian consumer.

Variables	Categories	Impact	Price Effects	Likelihood
Macro	Climate	Significant	Variable	Likely
	Geopolitical Risks	Significant	Upward	Likely
	Input Costs	Significant	Upward	Likely
	Energy Costs	Moderate	Slightly Upward	Likely
	Inflation	Minimal	Negligible	Very Likely
	Currencies and Trade	Significant	Unword	VoryLikoly
	Environment	Significant	Upward	Very Likely
Sectorial	Food Retail and	Vory Significant	Upward	Likoly
Sectorial	Distribution Landscape	Very Significant	Opwaru	Likely
	Food Processing	Cimificant	Deurourd	Vendlikely
	Industry	Significant	Downward	Very Likely
	Policy Context	Moderate	Negligible	Unlikely
	Consumer Food		Longood offerst	Unlikeli
	Awareness and Trends	Significant	Laggard effect	Unlikely
Domestic	Consumer Debt and		Deursward	Vendlikebi
	Deleveraging	Significant	Downward	Very Likely
	Consumer Income and	Significant	Downword	Likoly
	Income Distribution	Significant	Downward	Likely

### Table 4: Fundamental Drivers of Canadian Food Prices 2017

#### **Trump, Main Drivers**

The effects of the weather and climate on food prices have already been witnessed earlier this year as an El Nino induced drought in California shrank the supply of winter foods from that area and ultimately raised the prices of imported foods for Canadian shoppers. In 2017, the effects of **La Nina** weather patterns are likely to be as unpredictable as no two weather systems are the same. Also, the switch from an El Nino to a La Nina weather condition is already stirring up some excitement on the U.S. west coast after the recent drought. Further West, reports of questionable growth statistics from China raise serious cause for concern as Canada could see a downturn in trade with its largest trading partner after the United States.

### 66 Commodity prices could go higher in 2017 and increase input costs in processing, perhaps triggering the next **commodity super-cycle**."

Exports to China increased by over \$1 Billion in 2015, good enough for an almost 20% rebound from the 6% loss in 2014. Yet China's future may be uncertain due its slowing economy. Also, the Trump administration could spell a period of U.S. protectionism aimed at improving domestic issues, which could possibly be at the expense of the international community, including Canada. Agri-food and seafood exports are key to our economy (see Figure 1 on page 12). At the very least it is fair to assume that the Trump victory could have major implications on energy geopolitics around the world. President-elect Trump has called for more fossil fuel exploration within the US, fewer regulations and a complete withdrawal from the Paris Climate Change Agreement to curb greenhouse gas emissions. Trump's defiance towards OPEC is consistent with his views on U.S. energy security. One of the measures Trump has supported is reviving the Keystone XL project. All of these measures could potentially initiate the next commodity super-cycle, as we witnessed with the Bush administration a decade ago. At the moment, Trump's infrastructure plan has pushed up prices for iron, copper and other materials. Commodity prices could go higher in 2017 and increase input costs in processing, which could perhaps trigger the next **commodity super-cycle**.





Figure 1: Canadian Agri-Food and Seafood Exports

Given how many food products we import from abroad (see Figure 2), it makes our food economy highly vulnerable to currency fluctuations.



Figure 2: Canadian Agri-Food and Seafood Imports

Despite a possible rise in oil prices, the **Canadian Dollar** is likely to continue to drop in 2017 due to lower interest rates (see Figure 3). The U.S. Federal Reserve has been hinting for months that it plans to hike interest rates at least one more time this year, and this could happen soon. After Donald Trump's election, interest rates are even more likely to rise since markets are expecting the US under the Trump administration to sink even further into debt. As bond markets tumble, equity markets are souring and while a high inflation rate is expected in the U.S., a very different scenario is emerging in Canada. Food, however, may be the exception, as we experienced a few years ago. Likely, a low inflation environment will keep rates lower for some time, pushing the value of the Canadian Dollar lower against the U.S. dollar.

### As bond markets tumble, equity markets are souring and while a high inflation rate is expected in the U.S., a very different scenario is emerging in Canada."

**Hog futures** are higher in 2017, which suggests pork prices could go even higher next year. Even though **cattle** futures are expected to remain flat, we anticipate demand will increase and push retail prices higher still. The **fish** and **seafood** markets are more difficult to evaluate given the obscure nature of contractual arrangements. Nonetheless, we are expecting retail prices at the fish and seafood counter to rise due to increased demand across the country.





Canada's plan to implement **carbon pricing** could have a distortive effect on the prices of various food categories over the next few years. Schemes based on fossil fuel consumption will work well in the manufacturing and transportation industries where greenhouse gas emissions are directly linked to oil and gas usage. However, in the agricultural sector, where a significant amount of emissions are generated through animal waste and field level emissions, a fossil fuel-based carbon price could disproportionately burden food producers and food sector whose emissions are higher but not entirely fossil fuel-based. Livestock industries, particularly cattle, would be affected by this new regime and could increase the price of some food products. Such a system would indiscriminately inflate all food prices rather than impacting each food group uniquely based on their actual greenhouse gas emissions.

Our grocers play a pivotal role in the cost and variety of foods available to a community. It was a profitable year for most of them, except for Sobeys which is still dealing with its Safeway acquisition. Even though the retail grocery industry has several active players, the location of stores can leave many Canadian shoppers with few options. Thankfully, competition has always been fierce among grocery retailers. Industry leaders Loblaw, Sobeys and Metro have faced continuous attacks against their market share from new comers **Walmart** and **Costco**. Additionally, **Save-On-Foods**, which until 2015 operated exclusively in the provinces of British Columbia and Alberta, revealed a plan to open as many as 40 stores in Manitoba and Saskatchewan over the next three to five years. This new competition could yield reduced food prices and a greater variety of foods for residents in these provinces.

### 66 While prices in grocery stores dropped in 2016, menu prices in food service were increasing."

The importance of **food service** providers grows exponentially when we consider that they appear to be consolidating at a spectacular rate. One of the country's largest owners of chain restaurants, **Cara Operations**, commands over 800 stores under 11 brands including Swiss Chalet, Milestones, Montana's, Harvey's and East Side Mario's. This concentration of restaurant ownership, coupled with increased Canadian propensity to dine away from home could cause restaurant prices to increase beyond typical inflation rates in the future and give restaurant owners significant authority over what is served at the Canadian table. While prices in grocery stores dropped in 2016, menu prices in food service were increasing. Menu prices are likely to continue this upward trend in 2017.

### CANADA'S FOOD PRICE REPORT 2017: METHODOLOGY

This year, Canada's Food Price report employs a **machine learning model** for the first time, supported by the opinion of our expert panel. The forecast extends over eight food categories. The machine learning model utilized a combination of algorithms including multivariate linear regression and a support vector machine, SMOreg, to forecast the 2016 end of year prices as well as the 2017 end of year prices. Over twenty independent variables were identified as potential inputs but only those variables that achieved a high correlation with a price category were eventually added to the model. The variables included household income, immigrant income, income distribution, international aid, population, unemployment, commodity futures, fuel prices, crude oil prices, energy indexes, CDN exchange rate, U.S. overnight lending rates, global agricultural production, global rainfall, commodity prices and global temperatures.

To be considered, a potential input must have had a minimum of 15 years of reliable data from 1999 to 2016 and must have been available from a reputable data source. The mean absolute error, or each calculation, was used to determine which algorithms delivered the best prediction and the number of highly correlated inputs were used to determine the confidence level of the final predictions. The model then served as a guide for the advisors to apply their own insight and corrected any deficiencies found in the dataset used by the **algorithm**.<sup>5</sup>

<sup>5</sup> For more information about our methodology, please read *Canada's Food Price Report: Supplementary File.* 



### CANADA'S FOOD PRICE REPORT 2017: FORECAST

In 2017 food prices are again expected to rise above the acceptable inflation rate. The proverbial sweet spot for food inflation is anywhere between 1 and 2% each year. Such a threshold is manageable by all stakeholders and allows the industry to provide higher quality products at an affordable price. Food prices are forecast to rise between 3% and 5% in 2017, which is both higher than the previous year's price increase and above what is typically considered to be an acceptable food inflation.

#### Table 5: Food price forecast for 2017

Categories	Expected Price Increases
Restaurants	2% to 4%
Dairy and Eggs	0% to 2%
Fruits and Nuts	3% to 5%
Bakery and Cereals	0% to 2%
Meats	4% to 6%
Vegetables	4% to 6%
Other Food Items	4% to 6%
Fish and Seafood	4% to 6%
Overall Food Expenditures	+3% to +5%

Price increases will largely be due to the expected falling Canadian dollar value in 2017. Ironically though, President-elect Trump's known abhorrence for regulations will benefit the bottom line for many restaurants. Since his election, stock values of many **restaurant** chains have gone higher. The \$15 an hour fight affected the ability for many food service outlets to remain profitable. Trump's victory signifies good news for restaurant operators. For Canadian restaurants, it means less regulatory pressure coming from the United States, at least for a while. Many in the Canadian restaurant industry are likely to cheer, but ever so quietly.

**Dairy and eggs** along with **bakery and cereal** are expected to remain stable and within acceptable inflation rates of 0% to 2%, as these foods are produced largely by Canadian farmers who will be less affected by the exchange rate of the devalued Canadian dollar. The same cannot be said for **vegetables, fruits and nuts**, all of which are likely to



experience a sharp price rise due to high imported quantities. Vegetables are expected to increase by 4% to 6% and fruit and nuts by 3% to 5%. Also, deficiencies in the supply chain could be set in motion by the La Nina weather phenomenon, and the Northern regions are likely to feel the brunt of such increases.

Hog futures are higher in 2016, which suggests pork prices could go even higher in 2017. Even though cattle futures are expected to remain flat, we anticipate demand will increase and push retail prices higher still. On the other hand, chicken prices are expected to move sideways through 2017. The fish and seafood markets are more difficult to evaluate given the obscure nature of contractual arrangements. Nevertheless, we are expecting retail prices at the fish and seafood counter to rise due to increase demand across the country.

Province	Forecasted Change
Newfoundland and Labrador	+
Prince Edward Island	-
Nova Scotia	-
New Brunswick	+
Quebec	+
Ontario	<b>†</b>
Manitoba	ŧ
Saskatchewan	-
Alberta	+
British Columbia	<b>†</b>
Northwest Territories	-

#### Table 6: Food price forecast for 2017 – by province<sup>6</sup>

66 The fish and seafood markets are more difficult to evaluate given the obscure nature of contractual arrangements."

Finally, based on expert opinion, at the provincial level both Ontario and British Columbia are expected to experience higher than average increases, while in Manitoba new food stores will provide some price relief and hopefully new food varieties. Overall, food prices in 2017 are forecast for a moderate increase but developing factors could force prices even higher. The falling Canadian dollar and the Trump administration's year one agenda are the two most influential factors for Canadian food prices in 2017. Consumers should be observant and always remain price conscious to eliminate all forms of luxury cauliflower, whether foreign or domestic.

 <sup>(♠)</sup> Expected above average food price increase, (♣) Expected below average food price increase, (–) Expected average food increase.

### FOOD TRENDS IN 2017

#### **Trend No. 1: Celebration of Canadian Food**

In 2016 **Food Day Canada**<sup>7</sup> attempted to ignite a new food culture by inviting all Canadians to explore a list of 149 "Products of Canada" to commemorate the country's 149<sup>th</sup> birthday. For the **150<sup>th</sup> anniversary**, a reemergence of **traditional Canadian food** is likely to proliferate the market to pay homage to our ancestors and their food choices. Varying differences in food cultures across the country will likely be celebrated in 2017.

Despite differing opinions, over the last few decades, food has never been more affordable in the history of our nation. What has changed is how volatile prices have become and how open and more vulnerable our food economy is to the rest of the world. Perhaps such an event is an opportunity to celebrate Canada's food history after 150 years and would be best served by a national conversation about Canada's food choices to come over the next 150 years. Instead of applauding the food choices we have always made as a country, perhaps we should consider how those choices will impact our food prices, affect our food security and shape our future.

### 66 Despite differing opinions, over the last few decades, food has never been more affordable in the history of our nation."

A national conversation of this importance and magnitude would have to go beyond the limits of our usual polarized food preferences for organic, non-GMO, gluten-free, low carb, free range, grass fed, vegan friendly, zero calorie, etc. This will help to create an atmosphere where food and, most importantly, its value to Canadian society can be discussed by all of us, including our food service providers.

### **Trend No. 2: Food Science Fears**

Food science represents another important topic for our conversation about Canadian food values over the next 150 years. Non-GMO and organic foods have flooded the market amid public outcries for safer, all natural foods, but some GM crops including canola, corn, soy and sugar beets are already widely grown in Canada and have been for the past 20 years. However, many consumers may not know this because GMO labelling is not mandatory in Canada as it is in the United States. The new **Vermont** law implemented this year may

<sup>7</sup> Food Day Canada celebrates Canadian cuisine and food cultures (http://fooddaycanada.ca/)

add more pressure on Canada moving forward. Conscientious consumers may have avoided foods produced in the United States to escape GM foods, but with Health Canada's approval of a genetically modified salmon for human consumption, Canadians may face many more difficulties in satisfying their preference for all natural foods.

### 66 With the backing of Health Canada's approval this year, the GM salmon will be the first genetically modified livestock available to Canadian consumers, without the label."

There is little doubt that the GMO debate will heat up even more as the AquAdvantage salmon, developed by AquaBounty Technologies, begins appearing on the Canadian market sometime in 2018. With the backing of Health Canada's approval this year, this will be the first genetically modified livestock available to Canadian consumers. In a world in which risk perceptions reign supreme, effective risk communications are needed. Selling the technology to regulators was the easy part.

### **Trend No. 3: Food Fraud Awareness**

Food fraud has garnered more attention over the last few years. What has changed in 2016 are the convictions related to a few notorious cases in Canada. Counterfeiting, mislabelling, misrepresentation and economically motivated adulteration of food is becoming a more visible challenge for industry and regulators alike. Food fraud can often be observed with fish as most consumers are unable to differentiate between even visually dissimilar fish species once the fish have been cleaned and prepared. Many cases can be found in processing, even with raw commodities. Consequently, consumers may end up paying higher prices for lower valued fish species. A recent report from the **University of Guelph** indicated that up to one-third of fish sold in Canadian grocery stores and restaurants are mislabelled.

# 66 After climate change, the most significant challenge to food supply chain sustainability is food counterfeiting and fraud."

After climate change, the most significant challenge to food supply chain sustainability is food counterfeiting and fraud. It is the proverbial big elephant in the room. Most in the industry knows it exists, but rarely denounces it for fear of being perceived as a whistleblower. Worse, in some sectors, most companies are engaged in fraudulent activities that compromise their ability to do anything. Yet undoubtedly, eliminating food fraud will give the entire food industry a chance to become more sustainable.

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