

Unveiling Food Fraud: Insights, Tools, and Strategies

I was recently reading a post about food fraud in different food groups and food products in a report from the Canadian Food Inspection Agency (CFIA) between 2021 and 2022. The report indicates the samples collected and the percentages of fraud in each food or food group.

Even though it is crucial and plausible any effort in preventing food fraud, the report shows evidence of fraud. We may think the efforts are providing evidence of low level of fraud but, in my opinion, there should be no fraud at all. **Food fraud is criminal activity!**

According to the report, *22.5% of honey, 35.7% of “other expensive oils” and 13.1% of olive oil*, among other products, were found fraudulently adulterated.

Think about this:

- How good is your ability to determine the food fraud vulnerabilities applicable to the ingredients you receive?
- Which are the variables you take into consideration when assessing vulnerability to fraud?
- Most importantly, what are you doing to improve the way you determine the ingredients that are vulnerable to food fraud?
- How much time you have invested in learning and understanding food fraud?
- Do you have time during the performance of your daily activities to learn about fraud and develop a protocol that can help you identify proper ways to minimize the risk?

It has been a requirement by all **GFSI** (Global Food Safety Initiative) benchmarked food safety standards and many retailer supplier requirements, to carry out a food fraud vulnerability assessment of a food manufacturers entire supply chain with a very strong emphasis on ranking raw materials for potential vulnerability.

The expected outcome of the identification of any potential fraud, is the implementation of mitigation strategies/control measures, to reduce the risk of fraud. It has also been a requirement from regulators to identify “intentional adulteration of food with the purpose of economic gain”.

Even though the terminology used might be different, the intention is the same. We just need to be careful on our identification of fraud as some food could be adulterated with a hazard and some food could be adulterated with something that will not cause illness or injury (**Not a hazard**).

In 2016, Clare Winkel at Integrity Compliance Solutions (ICS), developed a risk assessment and ranking method that has been used to assess around 800 raw materials for vulnerability to food fraud.

This method is based on 3 independent variables: **likelihood X detectability X profitability**, with the outcome of a single numerical score, that can be easily ranked.

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In 2023 the team at ICS utilized the food fraud risk assessment method, to develop an online tool to bring automation, efficiency and consistency to the process:

Food Fraud Scorecard:



The **Food Fraud Scorecard** is designed not only to assist the people to carry out the risk assessment and allocate scarce resources to the areas that need attention the most, but also to provide the evidence that auditors are looking for during audits.

This “evidence” created by Food Fraud Scorecard, during the risk assessment process includes:

- **Ranking of all food fraud scores**, to easily identify those raw materials at higher risk of potential food fraud.
- **Risk assessment report for each of the raw materials** that your company uses.
- **List of reference material** used to create the risk assessment report.

As an example, I'll use one of the ICS clients' journeys, as a case study of how effective this tool can be, even for a small company with limited raw materials. This study is based on the food fraud risk assessment of 30 raw materials in 2018, 2021, 2022 & 2023.

The original 30 raw material rankings ranged from the highest score of 60 to the lowest score of 3, out of a possible highest score of 125.

Yes, the raw materials changed over time, as did the suppliers and importantly the scores changed to reflect those changed circumstances: availability, pricing, country of origin.

But the most significant change in the scores, related to one ingredient, cinnamon, that in 2018 started with a score of 60 & in 2022 had a score of 18.

The ranking process has enabled the company to identify their major food fraud vulnerability and review the supply chain of cinnamon then implement mitigation measures that helped in reducing risk.

They changed not just their suppliers, but the entire supply chain so that they knew not just the country of origin but could identify each major step in the international chain, along with the controls already in place.

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For example, in 2018 the cinnamon, was supplied by a broker who gave two different countries of origin, no source manufacturer, no certifications, no certificate of assurance or batch specific lab results.

Not only did the supplier not undertake any control measures, the company purchasing the product also did not take any samples, carry out any testing or even basic sensory assessment.

This is the perfect scenario for a crisis involving a recall, like the one in the case of the applesauce with cinnamon.

In 2022 that same ingredient was supplied by wholesaler that has supplied the following information and documentation:

- Country of origin.
- Name of the source manufacturer.
- Current GFSI certificate of the source manufacturer.
- Current GFSI certificate of the wholesaler.
- Batch specific lab results from the source manufacturer.

The company undertakes sensory evaluation of all received products (How the product looks like, smells like, tastes like) at receiving.

Using the Food Fraud Scorecard, for an ingredient like cinnamon, the likelihood score can be dropped with the addition of further “traceability” information and the profitability score will usually remain stable but it is the detectability score that can be dropped from 5 to 2 with the implementation of mitigation measures that will increase the changes of actually picking up the fraud, when it crosses your loading dock.

Every company, no matter how small, can implement inexpensive changes that will make a significant difference to the vulnerability of food fraud in their raw materials.

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