Tackling food fraud

From beef products made with horsemeat to counterfeit extra-virgin olive oil and disguised honey, food fraud is a worsening concern.

Beyond the economic cost, estimated by the Grocery Manufacturers Association (GMA) to be US$10 billion to US$15 billion a year, food fraud can lead to serious health risks.[1]

The US Food and Drug Administration (FDA) define three categories of food fraud:

1. Intentional adulteration of food with cheaper ingredients for economic gain
2. Introduction into commerce of food containing prohibited substances
3. Misbranding or mislabelling of food and ingredients or species substitution

Why is food fraud a growing concern?

The challenges involved in combatting fraud are complicated by the many opportunities for food adulteration and the complexities of today's global and multi-tiered supply chains.
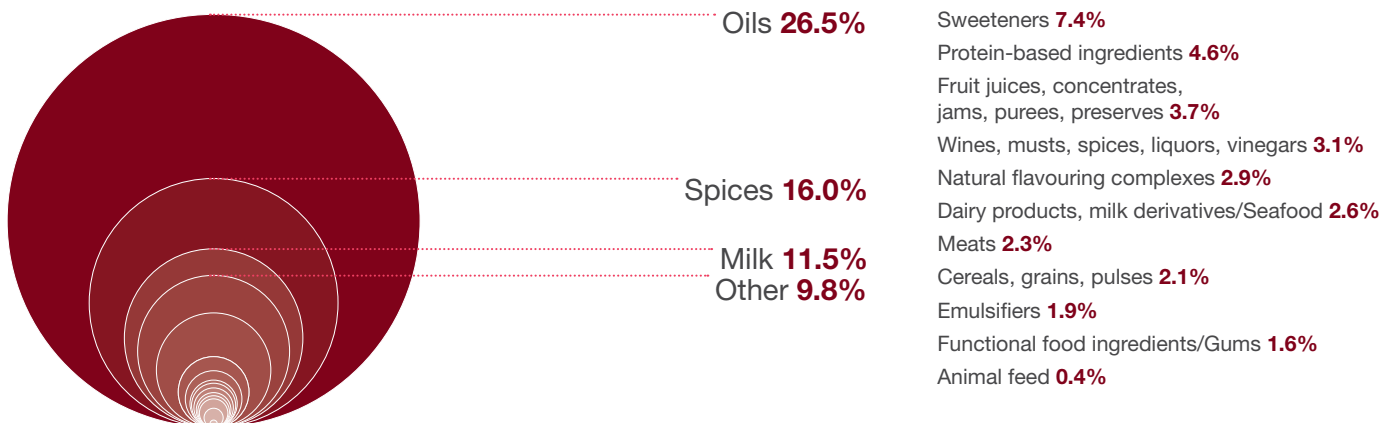
These conditions create a perfect storm for those wanting to commit fraud.

As a result, while awareness of food fraud continues to rise among consumers and the industry, major challenges impair companies' ability to detect and reduce the risk of fraud.

- **Lack of upstream supply chain visibility.** While knowledge of tier 1 suppliers may be known, visibility to tier 2 vendors and beyond is often blurred. Sourcing practices of tier 1 suppliers are often not assessed or understood.

- **Poor supply chain risk management practices.** Financial risk assessments and operational audits may be common, but a broad approach to supply chain risk management is rare.

- **Difficulty in detecting food fraud.** It can be difficult to effectively identify instances of food fraud. Strong food fraud programs have reliable testing and analysis, integrate seamlessly with broader supply chain operations and facilitate rapid incident reporting and response.

- **Complex and constrained regulatory framework.** In the US alone, multiple agencies are involved in preventing food fraud. But a 2012 US Government Accountability Office review identified overlapping challenges between agencies. With limited foreign-facility inspections due to limited federal resources, many companies feel the need to embark on their own endeavours.

Most commonly reported food frauds[2]

Oils **26.5%**

Spices **16.0%**

Milk **11.5%**
Other **9.8%**

Sweeteners **7.4%**

Protein-based ingredients **4.6%**

Fruit juices, concentrates, jams, purees, preserves **3.7%**

Wines, musts, spices, liquors, vinegars **3.1%**

Natural flavouring complexes **2.9%**

Dairy products, milk derivatives/Seafood **2.6%**

Meats **2.3%**

Cereals, grains, pulses **2.1%**

Emulsifiers **1.9%**

Functional food ingredients/Gums **1.6%**

Animal feed **0.4%**

1 Consumer Product Fraud and Deterrence 2010 study by the Grocery Manufacturers Association

2 US Pharmacopeia scholarly records (1980-2012)

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The best practice response

According to the GMA[3], a single food fraud incident can cost 2–15% of a company's annual revenue, depending on the size of the organisation.

That translates to a minimum US$200-million impact for a large food company with annual revenue of US$10 billion and a US$10m cost for a US$500m company.

This cost, as well as the adverse impact on brand and reputation, has led the food industry to continue to find and increasingly position itself as the first line of defence.

Leading companies apply a range of methods to detect fraud using advanced tactics, such as:

- **Advanced supply chain management and logistics simulations** that model the evolution of risk across the supply chain using leading technologies to identify those areas most prone to incidents and disruption – resulting in a source-to-table understanding of food fraud risks.

- **Rigorous supply chain risk and resilience processes** that integrate supplier financial and operational risks with product risk assessments to inform investment and resourcing decisions. Some programs go further, incorporating procurement, logistics and manufacturing.

- **Use of third-party data sources** to understand emerging risks, meet regulatory and compliance obligations and track actions. Such data provides information on food products, related regulations and surveillance methods.

- **Leading scientific capabilities** such as DNA testing and isotope analysis that can facilitate accurate labelling or authenticate ingredients based on chemical signatures.

- **Enhanced recall processes** that go beyond mock recall to look at capabilities across the supply chain (manufacturing, downstream and upstream) and confirm effective tracing, identification of nodes/sources and enable true recall execution and business continuity.

Food fraud challenges are difficult and complex to navigate, but food companies recognise that their brands — and revenues — can be impacted by supply chain partners they have limited visibility over.

That's why leading companies are taking control; seeking to understand their susceptibility to fraud, and acting to identify, assess, and improve their supply chain resilience.

3   Consumer Product Fraud and Deterrence 2010 study by the Grocery Manufacturers Association

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