Food Fraud

What you don't know could hurt you, your customer and your brand

Horse Meat?

Copper Sulphate?

Fertilizer?

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Olives coloured with copper sulphate. Counterfeit sugar contaminated with fertilizer. Horse meat in beef lasagne. Melamine in milk powder.

Together with the usual cases of substitution in seafood, spices and herbs, through to diluted olive oil and honey, food fraud to optimize profit is here to stay. Increasing food prices and an ever more complex global food supply chain present an irresistible opportunity for fraudulent activity.

Food fraud is the intentional adulteration, dilution, substitution, mislabelling, parallel trade, theft or counterfeiting of food ingredients or products for a financial gain. The impact of food fraud ranges from harmful adulteration potentially resulting in illness or death, to unethical substitution of inferior products which can destroy brand reputation or even the reputation of an entire exporting country. In all cases, the consumer does not get exactly what they expected or what they have paid for.

Identifying threats and vulnerabilities

Food fraud has always been present, however in the past it was largely a sporadic threat to a small number of high value food items. And, with food fraud investigations and prosecutions by inter-agency, cross-border authorities getting increased attention in the media, consumers are growing wary.

Anticipating food fraud threats requires you to think like an opportunist. If there is money to be made by fraudulent activities, then the who, when and how need to be identified. There is industry consensus that a combination of Threat Assessment Critical Control Point (TACCP) and Vulnerability Assessment Critical Control Point (VACCP) assessments, together with food safety (HACCP) assessments are necessary to manage this risk.

However there are gaps in the current industry knowledge and skills to consistently apply the methodology and tools and, as such, the resulting assessments may not identify or correctly prioritize the threats. As we have seen with HACCP, it will take time for the methodologies and tools to filter through all levels of the food supply chain.

Researching threats and vulnerabilities unique to your product, ingredients, process and supply chain is time consuming. The amount of information on previous incidents may be overwhelming. Alternately, there may be no precedent to substantiate a possible threat. But the lack of a precedent doesn't suggest that an ingredient is not vulnerable. Your ingredient may be the one to set a precedent.

The threat will be dependent on the type of ingredient and its form, with powdered ingredients being at the highest risk. Other threats are more economic in nature. They can be the result of:

- unexpected changes to crop yields due to unpredictable weather trends and patterns
- supply/demand imbalances
- escalating commodity of raw material prices
- currency fluctuations impacting long-range futures buying/selling of commodities

All of these situations can foster the economic environment for fraudulent behaviour to sprout.

Managing **threats and vulnerabilities**

Regardless of the methodology used, assuming sufficient rigor is applied, the outcome of the food fraud assessment should be the same. The potential threats need to be imagined and prioritized, with controls and actions applied to minimize the risk to the product, company and the consumer. There are several challenges in doing this:

Assessing threats and vulnerabilities

is a resource-hungry process that needs the combined knowledge and skills of a multi-disciplinary team with expertise in food science and technology, procurement, supply chain logistics, human resources and potentially site security and information technology. Informed choices need to be made on suppliers when there are multiple sourcing options and seasonal variations in your ingredients. Often the level of risk will be conversely related to changing economies; the rising cost of the ingredient or the cost of production relative to the alternative substitutes.

Prioritizing threats and vulnerabilities

can be difficult as the risk methodologies to do this are different to those used in traditional risk assessments such as HACCP. The potential impact, its likelihood and the ability to detect the threat need to be assessed and assigned a risk rating. Ironically, many ingredients considered a low food safety risk may in fact pose a high food fraud risk. The ability to anticipate or predict a threat is as vital as the actual practicality of testing. Detection is not always possible and adulteration, substitution or dilution is often found after receival and use.

Identifying controls and actions

to reduce or prevent food fraud may not be immediately realistic or practical. Threat-specific counter measures such as inspection, testing and monitoring can only be determined after the threat assessments have been completed. Changing suppliers, ingredients or the country of origin is not always an option. There may only be a few commercially viable alternate suppliers as the production of ingredients globally is constantly being centralized. Continuity in supply needs to be considered as does the cost impact on the pricing of finished products.

Legal defence

and the evidence required to defend a prosecution for food fraud will require all reasonable precaution and all due diligence to be demonstrated. Although this defence is well understood from a food safety perspective, the amount of evidence required for food fraud is not yet clearly established.

Ongoing resources

are needed for the continual threat assessments to be made so that they remain current. Any changes to ingredients, suppliers, country of origin, product formulation and new or emerging food fraud risks need to be assessed as they occur. There is a lot to be said for spending time to understand the processes and improve relationships with all your ingredient suppliers. Building—and maintaining—a high level of trust is critical. Food fraud always involves intent.

Food Fraud: Take Control

Assess
- HACCP training
- PAS 96 (TACCP training)
- Supplier compliance manager
- BSI advisory services

Act
- HACCP certification
- Supplier compliance manager
- BSI advisory services

Protect
- BSI SCREEN
- BSI VerifEye™

Challenges

As systems and controls are in the early stages of development, we do not yet have a benchmark on exactly what good looks like for food fraud prevention. A significant challenge for the food industry is how food fraud should be managed by all involved in the food supply chain. Prevention of food fraud by its nature will be driven by industry, as many countries simply do not have the regulatory framework for the surveillance, reporting and prosecution of food fraud. Transparency and access to information within the supply chain will be critical.

The ongoing cost of food fraud management systems is a significant resourcing challenge for the global food industry. There are many questions to be answered. Is it a fad and will there be an initial rush of industry interest in food fraud prevention that then becomes financially unsustainable in our highly competitive retail food markets? What will the future of food fraud look like in an industry generally driven by high volume and low profit margins? How will these costs be passed on to the consumer? Will there be reduced trade across global markets that will be counterproductive to future innovation of novel foods?

These challenges may drive an increase in product certification or the type testing of ingredients to verify authenticity of ingredients. High value meat products with provenance claims are already using technology to track individual portions supplied to high profile restaurants to guarantee the authenticity and quality of the product.
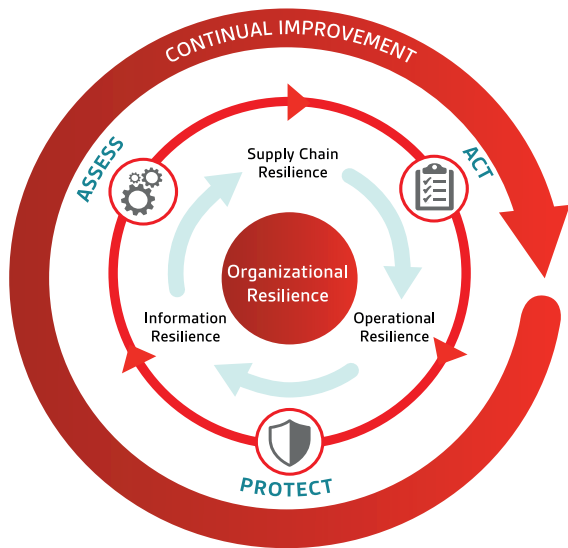
Compliance

The need for formalized preventative food fraud systems has been driven by several Global Food Safety Initiative (GFSI) standards. Auditors have found that although the industry has tried to meet the intent, there are challenges as the knowledge and skill base is often limited to a few people within a company. There is also a tendency to underestimate the potential for food fraud and an over reliance on approved supplier status to streamline processes at site receival. Many companies no longer thoroughly check ingredients on receipt if sourced from an approved supplier. Physical checks of ingredients during audits often find changes to the country of origin have occurred without suppliers given any notice to procurement. A change in the country of origin can significantly affect the food fraud risk as different countries have variations in their production standards, culture, political stability and economic situation. A change in country of origin can also affect the truth in labeling for provenance claims.

The future

Systems to manage food fraud will lead to an increased awareness of specific high-risk ingredients. The success of these systems will depend on the proactive management of potential threats, while still allowing access to high-quality, globally sourced ingredients at competitive prices. It will be essential that all sectors of the food supply chain have a sustainable yet effective system to identify and manage food fraud threats in a constantly changing market. It's also anticipated that there will be dedicated people in companies to specifically monitor food fraud, together with development of new technologies for tracking specific food ingredients and products in the global supply chain. Capacity building of staff to equip them with the knowledge and skills to actively consider food fraud in a measured way, will be the key to future success.

Could your business and brand names cope in the face of a food fraud crisis? What measures have you taken to prevent this happening, now and into the future?

Food Fraud: Take control

Diagram: CONTINUAL IMPROVEMENT — ASSESS, ACT, PROTECT surrounding Organizational Resilience (Supply Chain Resilience, Operational Resilience, Information Resilience)

PAS 96 training

PAS 96 improves the resilience of all parts of production and supply chain against attack. PAS 96 covers multiple types of attackers and addresses a number of specific threats. The TACCP (Threat Assessment Critical Control Points) process assumes and builds on a business' existing effective operation of HACCP (Hazard Analysis Critical Control Points), as many precautions taken to assure the safety of food, are likely to also deter or detect deliberate acts.

HACCP training and certification

HACCP is a preventative food safety management system in which every step in the manufacture, storage and distribution of a food product is analyzed for microbiological, physical and chemical hazards. HACCP can be critical to your compliance with national or international food safety legislation. HACCP outlines good manufacturing processes for all food sectors and can be key to your business when taking part in international trade.

BSI Advisory services

If you know you can't afford to spend time managing improvement, BSI Advisory Services offer full supply chain management review, revision and implementation support.

BSI VerifEye

Our supplier verification service gives your organization the on-site, third-party professional visibility into your suppliers to effectively manage your supply chain and enterprise risks. Our Verification Audits give you cost-effective assurance that your suppliers are not exposing your brand to potential risks through accidental or intentional misrepresentation.

BSI VerifEye profile web link

A BSI VerifEye weblink enables you to promote the credentials of your organization in a transparent manner, ensuring trust, credibility and real competitive differentiator. It gives buying organizations, procurement personnel and supply chain professions assurance that your organization and products can be trusted, which can me a faster due-diligence and qualification process, reduction in audit frequency and even preferred supplier status. Of course, it also makes sense to look for one of our weblinks when choosing new suppliers too.

SCREEN Intelligence

Determine country risks using our web-based intelligence platform with country risk maps for social, environmental and security issues. This web-based tool assists companies in identifying and understanding their supply chain security, business continuity and corporate social responsibility needs and threats.

Why BSI?

We believe the world should be supplied safe, quality food and we offer a broad range of Food Safety certification and risk management services.

We're a leading food safety certification provider, with extensive auditing capacity and capability to conduct integrated audits for a wide range of Food Safety standards across the entire food and beverage supply chain - including GFSI recognized standards.

Our service solution for food safety includes certification, training, assessment and supply chain solutions – providing you and your customers' assurance and enabling you to manage risk more effectively.

Our products and services

Knowledge

The core of our business centres on the knowledge that we create and impart to our clients. In the standards arena we continue to build our reputation as an expert body, bringing together experts from industry to shape standards at local, regional and international levels. In fact, BSI originally created eight of the world's top 10 management system standards.

Assurance

Independent assessment of the conformity of a process or product to a particular standard ensures that our clients perform to a high level of excellence. We train our clients in world-class implementation and auditing techniques to ensure they maximize the benefits of standards.

Compliance

To experience real, long-term benefits, our clients need to ensure ongoing compliance to a regulation, market need or standard so that it becomes an embedded habit. We provide consultancy services and differentiated management tools to facilitate this process.

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