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Combatting Food Fraud With Intelligent Due Diligence

INTERNATIONAL

Combatting Food Fraud With Intelligent Due Diligence

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In recent years, law enforcement agencies have begun to take food crime increasingly seriously. International criminal gangs are believed to be diversifying from drug trafficking and armed robbery into fraudulent foods1. They realise there is money to be made in counterfeit food, and that sentences associated with it are traditionally much lighter.

This escalating problem represents a significant potential threat to consumers. Counterfeit foods can range from the unauthentic to the dangerously unsafe. Fraudsters are becoming more strategic and tenacious in their efforts and while they may not deliberately sabotage food safety, their disregard for it is a major concern. The integrity and safety of the food industry is on the line and the stakes have never been higher.

Decisive action is being taken by the UK Government and the Food Standards Agency to counter this threat. In 2014 a dedicated National Food Crime Unit was established to help tackle the problem. And on 1 February 2016 new sentencing guidelines come into force covering Health and Safety Offences, Corporate Manslaughter and Food Safety and Hygiene Offences. These guidelines are applicable to the Health and Safety at Work Act 1974 and breaches of food hygiene regulations in both England and Wales.

From February next year, perpetrators of food crime will face stiffer financial penalties and potential imprisonment. While the main target of law enforcement agencies is intentional upstream adulteration, directors of food organisations who fail to take reasonable measures to prevent fraud in their supply chains could also be deemed culpable.

A Complex Global Industry

The global food supply chain is vast and complex. It involves tens of thousands of food ingredients, commodities and products originating from virtually every country and sea on the planet.

We have moved ingredients and products around the world for thousands of years, but in the last fifty years easy access to air and sea freight has opened new export opportunities. This has fuelled consumer desire for new and non-seasonal foods, creating both opportunity and risk for the sector.

Fraud in the food supply chain is not a new phenomenon. It has existed ever since food became a commodity, manifesting itself in many guises, from the adulteration of wine in Roman times to the use of unsavoury additives in Victorian England. However, the increasing complexity, urgency and economic value of today's food supply chain make it more vulnerable to systematic, large-scale corruption.

For the purposes of this report, we consider fraud to be 'the deliberate intent to deceive, motivated by the prospect of financial gain'. And we consider how food organisations can navigate a clear path to mitigate their risk of exposure to this threat via an intelligence cycle. With a proactive and cohesive approach the industry can outwit the fraudsters.

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About Leatherhead Food Research

Leatherhead Food Research provides expertise and support to the global food and drink industry with practical solutions that cover all stages of a product's life cycle from consumer insight, ingredient innovation and sensory testing through to food safety consultancy and global regulatory advice. Leatherhead operates a membership programme which represents a who's who of the global food and drinks industry. Supporting all members and clients, large or small, Leatherhead provides consultancy and advice as well as training, market news, published reports and bespoke projects. Alongside the Member support and project work, Leatherhead's world-renowned experts deliver cutting-edge research in areas that stimulate long term commercial benefit for the food and drink industry.

Leatherhead Research Limited is a Science Group (AIM:SAG) company. Science Group provides independent advisory and leading-edge product development services focused on the Group's in-depth science and technology capability. It has six offices globally, two dedicated, UK-based R&D innovation centres and more than 350 employees. Other Science Group companies include Oakland Innovation, OTM Consulting and Sagentia.

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The Scale of the Threat

Ultimately, the scope of the threat is rooted in two key factors: the motivation and capability of potential fraudsters and the vulnerability of target organisations.

It is important to note that most organisations and individuals in the food supply chain operate with the utmost integrity. Regulatory frameworks are followed by many, abused by few. Yet as we saw with the horsemeat scandal of 2013, it only takes a small number of rogue players to contaminate the wider supply chain and tarnish the industry's reputation.

All supply chains – whether simple or complex – present potential risks that need to be identified and carefully managed. This should be a central focus for brands as they seek to reduce their vulnerability to food fraud.

The Regulatory Environment

The HACCP food safety system, first developed in the 1960s, is used and accepted globally to reduce the risk of accidental contamination. It involves the analysis and control of biological, chemical and physical hazards from raw material production, procurement and handling to manufacturing, distribution and consumption of the finished product. However, while food fraud can seriously compromise food safety, HACCP is not geared towards deliberate contamination; its remit doesn't stretch far enough.

Following the horsemeat scandal, new requirements related to food fraud were included in Issue 7 of the BRC Global Standard for Food Safety. It places the onus on manufacturers to reduce their exposure to fraud and promotes greater transparency and traceability in the food chain.

Clause 5.4.2 of the Standard says manufacturers should understand and monitor the supply chain through a vulnerability assessment: "*Where raw materials are identified as being of particular risk of adulteration or substitution, appropriate assurance and/or testing processes shall be in place to reduce the risk.*"

A 'vulnerability assessment' is defined by BRC Global Standards as a documented risk assessment. It should be designed to identify potential sources of food fraud within the supply chain and to prioritise control measures to minimise the chances of receiving fraudulent or adulterated raw materials. However, the Standard doesn't set any tangible guidelines on how to identify 'at risk' items.

To help plug this gap, a Publicly Available Specification (PAS) has been developed to document standardised best practice in relation to food fraud prevention. PAS96:2014 guides food business managers through approaches and procedures to improve the resilience of their supply chains to fraud or other forms of attack.

One focus point of PAS96:2014 is the Threat Assessment Critical Control Point (TACCP) system. This can be aligned with HACCP, but it focuses on people rather than processes. TACCP procedures provide a platform for food industry professionals to 'think like a criminal', enabling them to identify places in the supply chain that may pose the greatest temptation for fraudulent activity.

Intentional adulterators are well aware that international trade is robustly regulated with specifications, contracts, systems, procedures, audits and testing. But because they see food as a route to profit they are prepared to invest and constantly identify and implement new systems to deceive. In order to keep one step ahead of these fraudsters, the industry needs to anticipate their motivations and capabilities.

The horsemeat scandal spotlighted how easy it is for the integrity of the food chain to unravel when it is deliberately sabotaged. It seriously undermined the reputation of the sector, but food safety was not compromised. Another time the outcome could be quite different and food sector leaders need to take action in order to avoid an incident of this nature in future.

Ultimately, fraud prevention best practice boils down to due diligence. Food organisations have a duty of care to identify and mitigate any threat to the integrity of the products they sell. And this obligation needs to be taken very seriously in light of the high stakes surrounding food fraud today.

But how should we define due diligence? It's about scrutinising the food supply chain and taking reasonable steps to avoid breaching regulatory requirements. It involves thinking like a criminal to beat the fraudsters at their own game. That means anticipating what and where their next move may be, then taking measures to ensure you don't become a victim.

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A food intelligence system built on the same principles as the 'intelligence cycle' adopted by military and government agencies2 can be an effective way to achieve this. It involves setting out defined steps for planning and strategy development, followed by the collection, processing and exploitation of data which is then used to shape decision making and policy. Outcomes are reviewed and learnings are fed back into the planning stage, enabling the process to continue ad infinitum.

This framework method can bring many benefits for organisations seeking to combat the risk of food fraud. At the outset it provides focus, enabling clear definition of needs and prioritisation of actions. It also has repeatability and the flexibility to be deployed across various product categories or countries of origin. It can be adapted in light of any changes to procedures, suppliers or legislative requirements. And it can be highly responsive to emerging threats, enabling rapid remedial action to be taken.

The Food and Drink Federation has produced a five step food authenticity guide3 to help businesses protect themselves from food fraud. This can underpin a robust intelligence cycle that draws on internal and external resources and expertise as appropriate.

FDF Food Authenticity Guide in Summary

Step 1: map your supply chain

The FDF advises organisations to collect and collate information related to the entire supply chain on a product by product basis. Major product categories that are most critical to the business should take precedence. Gathering details about suppliers all the way to source provides the bare bones for a supply chain map to underpin the intelligence cycle.

Step 2: identify impacts, risks and opportunities

When the supply chain map has been established, finer details surrounding risk can be identified. This might include tracking media coverage of key items in the supply chain and scenario planning.

Step 3: assess and prioritise your findings

Identified risk factors need to be ordered in terms of priority. Creating a risk matrix can help the process. It provides a framework for easier recognition of imminent risk, based on factors such as changing regulatory requirements, supply and demand imbalance and documented cases of fraud.

Step 4: create a plan of action

Once it's clear that there is a risk of food fraud, a defined set of actions must be established to counter the threat. It's important to develop a feasible and reasonable response, and to be clear about who is responsible for different aspects. A first step might be to scrutinise the effectiveness of supplier assurance systems and consider whether authenticity testing should be introduced or escalated.

Step 5: implement, track, review and communicate

The final step in any intelligence cycle surrounds implementation and measurement. With food fraud mitigation, actions can typically be integrated with existing supplier assurance and audit systems. Learnings should be monitored and fed back into business operations so that processes can be optimised to reduce the risk of the business becoming a victim or accidental perpetrator of food fraud.

Identifying and Managing Risk

In order to assess and manage vulnerability, you first need to understand it. Exploring the following factors can provide an effective starting point to spotlight potential issues:

- Historical incidents
- Economic factors & price fluctuations from weather episodes
- Geographic origins with a history of issues in specific categories
- The length and / or complexity of the supply chain
- Storage & distribution arrangements
- The nature of the raw material (e.g. value of the material or size of the market)
- Physical form (e.g. whole, chopped, minced or powdered)
- Emerging issues or concerns (e.g. recent news or regulatory authority alerts)
- Existing controls (e.g. routine testing or audits)
- Availability (e.g. seasonality or harvest variability)
- Ease of access to raw materials (varietal substitutions).

The challenge for food technologists, enforce-

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ment officers and buyers is to consider each of these factors and keep one step ahead of the fraudsters within their limited resources. Drawing on support from third party experts providing food intelligence services can help.

An effective way to identify emerging or potential risk is to follow a predictive approach rooted in historic and current information about food issues and incidents. This requires comprehensive surveillance and capture of global data, plus the tools and expertise to extract, analyse, interpret and disseminate the relevant information.

One such solution is HorizonScan software, developed by Leatherhead Food Research and the Food and Environment Research Agency (FERA). It has spotlighted a large number of specific commodities by country of origin where a historical and current risk to fraud has been identified. For instance, hearsay has for some time indicated that the volume of extra virgin olive oil sold globally far exceeds the volume produced and recent poor harvests have put Spanish and Italian olive oil producers under extreme pressure. What's more, Italian authorities are currently investigating 'major irregularities' in the industry after bottles labelled extra virgin olive oil were found to be fraudulent.

Insights of this nature empower the food industry, enabling informed decisions to be made surrounding testing and supplier assurance systems. In some cases, the risk of fraudulent activity can be mitigated by moving supply chains to another country of origin.

Conclusion

The food sector represents a high-value industry with many business opportunities. However, mounting evidence suggests it is also beginning to attract the attention of sophisticated criminal gangs who exploit the industry unfairly. Their actions represent a constant threat to consumer safety that falls outside the remit of tried and tested food safety regimes.

Trends in consumer demand for cheaper foods, non-seasonal foods, more exotic foods are compounding the situation. Brands are also under increasing pressure to reduce costs and boost profitability in this highly competitive arena. As it gets harder to satisfy these conflicting demands on a large scale, cracks can appear in the supply chain. These vulnerable spots are golden opportunities for fraudsters.

Predicting where those cracks will fall, and taking measures to avoid them, is business-critical for food sector organisations. There is a pressing need to both prepare for fraud and protect against it on an ongoing basis. Brands that don't take adequate measures expose themselves to serious financial implications. From 1 February 2016, senior directors of those brands could be held personally accountable, with heavy fines and the threat of custodial sentences for fraud that compromises consumer safety.

Robust due diligence has never been more important. And adopting a well-considered food intelligence cycle can prove an effective means to achieve it.

References

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2. Intelligence Cycle, FBI definition and description www.fbi.gov/about-us/intelligence/intelligence-cycle
3. A full copy of the Food and Drink Federation's Food Authenticity Guide is available at www.fdf.org.uk/food-authenticity.aspx

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