The 'new' phenomenon of criminal fraud in the food supply chain

The rapid rise of food fraud and the collective responses to the global threat

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1. Introduction

What's new about criminal fraud in the food supply chain? In itself, nothing. Criminal fraud has been around for thousands of years in the form of adulteration, substitution, tampering or misrepresentation, wherever the opportunity and incentive for profit has arisen. The current high profile of fraud in the global food supply chain is mainly due to the 2013 horsemeat scandal in Europe as well as a UK government-commissioned review by Professor Chris Elliott into the *Integrity and Assurance of Food Supply Networks*. However, there have been several other well publicised incidents that have hit the international headlines and in recent years, a number of factors have come together to make food fraud a significant global threat for the food industry. Although the exact scale and penetration are unknown, regulators, law enforcement agencies and industry are recognising that its potential for public health and economic damage is far greater than that of food safety, which has been the main focus in recent decades.

The food and drink industry is just starting to realise that food safety and food crime cannot be put in separate boxes and as such we need to find new ways of approaching the problem and developing effective solutions. No longer can food safety sit squarely in the remit of technical and quality functions. It is a board level, company-wide and global issue.

2. Background - The growth and current status of criminal fraud

- Food fraud - the deliberate substitution, addition, tampering or misrepresentation of food, ingredients or packaging - is a significant problem which has been in existence for a long time but which has developed rapidly in scale and gravity in the last 50 years owing to the changing structure of the legitimate food supply chain.

- Contributing factors include:
    - the growing length and complexity of today's supply networks
    - the concentration of buying groups and retailers into very few multinational chains with a great deal of buying power forcing downwards pressures on prices
    - the advent of refrigerated transport and warehouse systems enabling the shifting and long term storage of large quantities of perishable goods
    - the rapid development of technology, internet and mobile communications, providing tools for criminals to covertly transact illegitimate deals and easily set up communications networks.

- The economic crisis has provided the right conditions to foster growth in organised food crime and the development of organised criminal groups, which in many ways operate like legitimate businesses.

- The scale of food fraud is not known as there are no precise figures available. However it is estimated that it costs the world economy $49 billion annually and is growing.[6] The University of Minnesota National Center for Food Protection and Defense (NCFPD) has estimated that about 10 percent of US food could be adulterated.

- Europol has estimated that there are 3,600 organised crime groups active in the EU. In its *Serious and Organised Crime Threat Assessment (SOCTA) report 2013*, it found that international drug trafficking remains the most active organised crime activity in the EU but counterfeit goods with an impact on health and safety are numbered in its top seven priorities.

- Fraud is a cross-border issue which exists globally and cannot be dealt with inside national borders. International cooperation and concerted action is required.

- Much can be learnt from the experiences of counterfeiting in the branded fashion goods and pharmaceutical sectors.

- The horsemeat scandal has had the beneficial effect of drawing a close focus on this issue from national governments, the EU, international law enforcement agencies including Europol and Interpol, and industry.

It should be stressed that much fraudulent activity is occurring outside of and in parallel to legitimate supply and distribution networks. Nevertheless, the industry must be vigilant for crossover and infiltration at vulnerable points in their networks.

Case Study 1: Anatomy of a production fraud – July 2014

Case Study

A processing factory supplying to major food companies was spectacularly caught perpetrating a well organised and company-wide fraud to supply substandard and out-of-date meat. This was revealed by an undercover reporter who covertly filmed their operations.

Methods:

- Mixing expired meat with fresh meat
- Mixing chicken skin with breast meat
- Putting out of date chicken breasts back into the fridge
- extending expiration dates
- Concealing suspect stock from quality inspectors
- Dual sets of records kept – one for the inspectors and one for real.

Characteristics:

- Highly organised methodology with 'acceptable' mix ratios which an employee claimed was set out in a manual.
- Deliberate intent by senior management to deceive customers. This drove employee behaviour despite knowledge and indeed recognition of their wrong doing and of the consequences, even to the extent of shifting suspect stock around while inspectors were on the premises.
- In a complete subversion of a 'good' company culture, the quality control department mandated fraudulent practices, and for at least one individual employee, this level of cunning was a source of pride.

Source: *2014-07-21 08:11 Shanghai Daily Web Editor*

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3. Conclusions and recommendations

3.1 The problem of food fraud is huge and growing and requires a new and more radical approach to fraud identification and prevention than is in the case currently. Companies that do not address this issue as a matter of priority are leaving their customers and their brands seriously exposed.

3.2 Food fraud is a serious and potentially fatal crime which requires attention at the board level and engagement across all functions of the organisation to tackle it effectively. There must be more coordination between the technical, operational, procurement, sales and marketing departments.

3.3 The horsemeat scandal has thrown sharply into relief that international and national regulators across Europe and indeed the rest of the world have been outpaced by the changing methods of buying and sourcing foods. Retailers and manufacturers themselves have been caught out by the speed of change in their own systems. The situation has caused a paradigm shift from detection and mitigation to prediction and prevention. Transparency, traceability and data sharing among government, industry, and third-party organisations worldwide will become major themes in addressing global food fraud threats.

3.4 Much work is being done to improve existing techniques for controlling and testing product and supply integrity. These include:

- the new standards and controls for agents and brokers which have previously represented unregulated gaps in the supply chain
- additional clauses to detect fraud included in the Global Food Safety Initiative (GFSI) certified standards
- specific training for technical, buying and operational departments, as well as regulators to raise fraud awareness
- recognition and encouragement of whistle blowing by staff as an important way of detecting fraud
- above all, the recognition of the need for strong leadership and a sound corporate culture to lower the risk of acceptance of fraud.

3.5 The advent of new analytical and computational abilities or 'big data' solutions have enabled the development of prediction and identification techniques that will assist businesses to better manage their risks through horizon scanning and reference to shared regional, national and international databases. The UK and other governments are also funding a number of important analytical and research projects to identify new and more reliable predictive methods for industry and regulators to assess fraud risk, an example of which is NSF International's own predictive fraud model. (See pg. 7)

3.6 An in-depth understanding of the culture, employee awareness and attitudes and internal relationships is vital in order to provide the leadership required to instil a strong anti-fraud ethic and set up specific cross-functional training and education programmes to make employees more fraud aware.

3.7 Knowing the supply chain end-to-end is the single most important recommendation. The development of a stable, trusted and engaged, and technically competent supplier base is key to generating an effective and secure supply chain. Companies must work with their supplier base to develop sustainable trusted relationships which goes way beyond GFSI-benchmarked audit standards.

3.8 An increased level of risk-based testing to verify specification compliance and for speciation and authenticity is recommended to validate suppliers' own testing programmes and cross reference the results. This should embrace integrity and traceability audits that include mass balancing of input and output materials.

3.9 Whistle blowing mechanisms and monitoring of customer complaints provide valuable information and feedback that can highlight important areas of concern. These should always be followed up.

3.10 Preparation for the eventuality of a product recall or other crisis is of paramount importance to minimise the damaging effects to human health and brand reputation. The development of emergency protocols and emergency exercise programmes are significant elements of a risk management programme.

3.11 As a final point, consumer education will be key to helping stamp out fraud by creating a greater awareness of origin and labelling. Often fraud is regarded as a victimless crime and consumer memories tend to be short, while their demand continues to be driven primarily by price. The industry will continue to accede to demands for lower prices until and unless consumer demand drives change in their sourcing priorities.
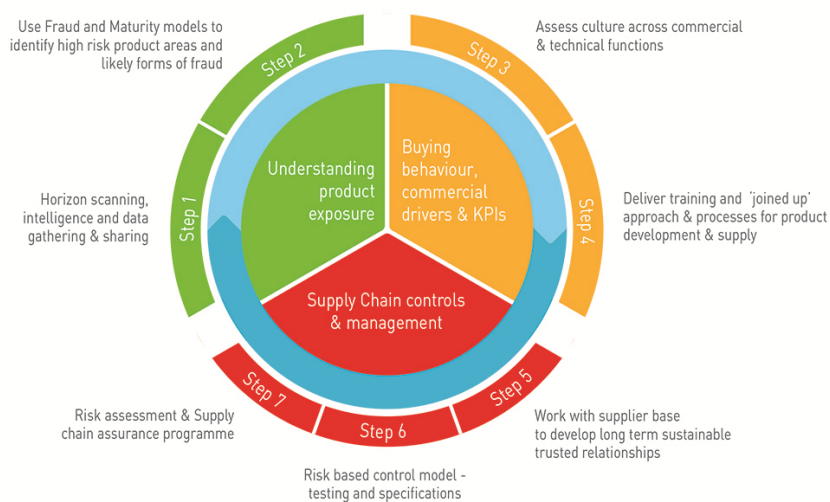
In summary, NSF International recommends a holistic approach for businesses to minimise the opportunity for food fraud in their supply chain. It has developed the comprehensive 7-step programme illustrated below.

FOOD FRAUD AWARENESS, DETECTION & PREVENTION

Fraud control is a complex commercial and supply chain issue and is not something that can be solved by 'Technical teams' in isolation.

Use Fraud and Maturity models to identify high risk product areas and likely forms of fraud

Assess culture across commercial & technical functions

Horizon scanning, intelligence and data gathering & sharing

Deliver training and 'joined up' approach & processes for product development & supply

Step 1

Step 2

Step 3

Step 4

Step 5

Step 6

Step 7

Understanding product exposure

Buying behaviour, commercial drivers & KPIs

Supply Chain controls & management

Work with supplier base to develop long term sustainable trusted relationships

Risk assessment & Supply chain assurance programme

Risk based control model - testing and specifications

What should your business do right now?

You should consider fraud in the context of your broader risk management framework.

➢ Gain board commitment to focus on this issue and provide the leadership required to set company-wide objectives and implement the necessary staff training programmes.

➢ Review your supplier contracts and make sure your terms and conditions are sufficiently tight. Make it clear that substitution is potentially criminal and will be dealt with as such.

➢ Know your suppliers – identify and maintain registers of your suppliers and where appropriate, their core ingredient suppliers. Learn and understand your supply chain beyond the *one up/one down* approach and understand the relative risks involved within each supplier and at every step of the chain.

➢ Know your products – set up and maintain specifications, which document your key supply requirements and put in place enhanced control measures.

➢ Review your product risks and set up appropriate testing programmes. Establish a forum to track and keep abreast with new technologies and techniques that may assist you with simpler, faster, more accurate product assessments.

➢ Be sure to follow up any complaints or concerns with suppliers, procurement teams and others as appropriate.

➢ Challenge your traceability systems and procedures with realistic scenarios.

It should be an important business priority for companies operating in the international food supply chain to undertake a top down, company-wide review of their policies, systems, operating practices and controls relating to their product and supply integrity.

If you would like more information about the content of this report or about the supply chain risk management solutions NSF International provides, please contact Chris Slack, Senior Marketing Manager, at cslack@nsf.org *or +44 (0) 1992 885684.*

This paper is a summary of the NSF whitepaper on *The 'new' phenomenon of criminal fraud in the food supply chain.* **The full document can be downloaded** here