Food Fraud and Food Threat

Vulnerability Management & Countermeasures

The Food Safety Modernization Act (FSMA) in the USA, and the Global Food Safety Initiative (GFSI) effort to coordinate and simplify food safety certification, has led to requirements for certified firms to assess their vulnerability to the risks of food fraud and food threat and to develop plans for responding to such incidents.

This study, conducted by University College Cork and Teagasc, measured the awareness and preparedness of the agri-food sector on the island of Ireland around these issues and, drawing also on 'best-practice' here and in four other OECD countries, developed a framework for understanding current practice and future developments.

Introduction

Fraud and threat are the result of intentional action on the part of malevolent or criminal actors. Protection against them therefore necessitates policy and processes that extend beyond those designed to ensure food safety & quality. We therefore defined *Vulnerability Management Initiatives* as: *strategies or actions that can be undertaken by stakeholders in the food supply chain to eliminate or reduce their own or others' vulnerability to the risk of food fraud or threat*.

Vulnerability Management Initiatives (VMI's)

Following the GFSI's requirement in 2017 for assessment of vulnerabilities and the planning of countermeasures against fraud and threat, a requirement to adopt such processes has been incorporated into all the prominent food safety standards worldwide.

Food Fraud & Threat on the island of Ireland

A survey of island of Ireland business's awareness of, and responses to, food fraud & threat was conducted in mid-2018. Responses were received from approximately 7.5% of all registered food manufacturing businesses in the Republic and Northern Ireland.

The survey found a generally high level of awareness and knowledge of the issues, of susceptible ingredients, and of past incidents. Some 74% of firms already had systems in place specifically to deal with fraud or threat, and another 13% were planning on doing so.

While the majority (61%) of firms hadn't experienced any fraud or threat in the previous 3 years, 39% had done so, and 12% had experienced it "more than once a year". However, in the majority (66%) of these cases, it was thought to be a "supplier cutting corners". Only 29% of cases were felt to be "deliberate and rational fraud" (Figure 1). The response of the affected firms was most frequently to de-list or penalise the supplier (58%), while the authorities were alerted in only 10% of cases.
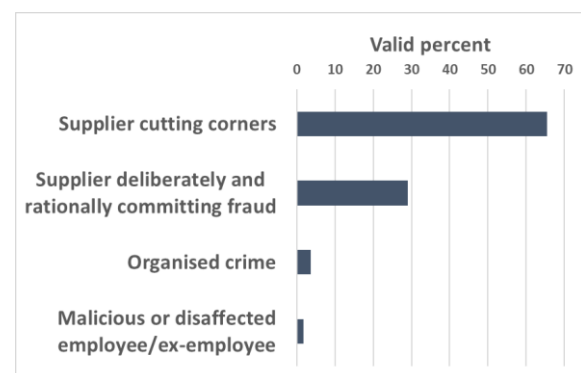

Figure 1 Type of perpetrator

Adoption of VMI's on the island of Ireland

Certification bodies such as BRC, SQF, IFS and FSSC, have been probably the strongest influence for the adoption of VMI's. Among Irish businesses, BRC was by far the most adopted standard (74%, with another 5% preparing for it).

By far the most frequently implemented VMI's were control measures on the inbound supply chain: supplier certification; purchasing policy; supplier auditing or inspections (Figure 2). Firm-level initiatives, such as site security or employee vetting, were also widely adopted. "Horizon-scanning" methods, such as outsourced intelligence gathering or monitoring of food fraud databases, were relatively uncommon.
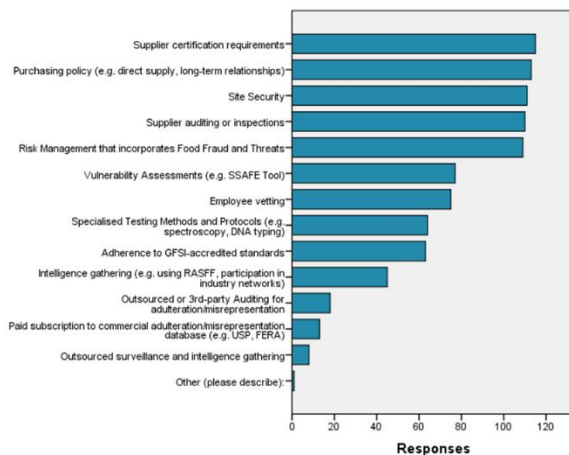

Figure 2 Vulnerability Management Systems and Processes

Practice in other OECD countries

At the same time as the survey, experts (academics, regulators, law enforcement and industry representatives) in Denmark, the Netherlands, the UK and the USA were interviewed on experience and practice in those countries. Three different kinds of VMI's were found:

1. Initiatives based on the institutional landscape, e.g. establishing of new "food crime units" or cross-agency bodies;
2. Initiatives based on collective industry-led action, e.g. trusted data sharing;
3. Company practices to address vulnerabilities, e.g. in-house testing and monitoring.

In contrast to the results of the survey, however, the experts advocated an integrated approach and a partnership between public and private stakeholders. Drawing on analysis of both the survey and the interviews, **Table 1** gives a classification of VMI's by their type and by the level of interaction among those involved. This points to the benefits to be derived from enhanced collaboration at both industry and at public-private levels. Mechanisms to ensure confidentiality are key to building the trust required to support such collaborations.

Table 1 Vulnerability Management Typology

	One Stakeholder	Multiple Stakeholders
Public-Private	N/A	Policy/Regulatory bodies and supply chain actors e.g. *Food Confidence Taskforce* (NL); *FPDI* (USA)
Public	Agency Centric e.g. Food Crime Unit (incl. "interdisciplinary teams")	Multi-agency e.g. *Food Fraud Task Force* (FSAI, RoI)
Private	Firm Centric	Supply Chain e.g. *Food Fortress* (NI & RoI); *FIIN* (UK)