

FFI Report

Food Protection Strategies Including Food Safety, Food Defence, and Food Fraud – Review and Insights from the MPI New Zealand’s Food Protection Forum

This report was created as a supplement for the 2015 “Food Protection Forum” conducted by the New Zealand Government Ministry for Primary Industries.

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Executive Summary: As with most developed nations, brand owners and government regulators in New Zealand face increasing difficulties addressing the global scourge of *Food Fraud* and counterfeit products as well as emerging food defense concerns. Compounding this is increasing consumer demands for enhanced transparency in the food chain from both the public and private sectors.

Food Protection is an over-arching concept that includes the four pillars of the food system; *Food Quality, Food Safety, Food Fraud, and Food Defence*. Successful implementation of programs across this continuum will also contribute to *Food Security* – the safe, continuous supply of nutritious and affordable food. Another benefit of protecting the supply chain is that food chain transparency is enhanced through the sharing of product related information amongst supply chain stakeholders without *loss, noise, delay, or distortion*.¹

Integrated Food Protection will facilitate increased consumer trust and social harmony by enhancing food supply chain transparency and reducing system vulnerabilities from attack.



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1. Introduction

This report was specifically created to provide an overview of key concepts presented at the “Food Protection Forum” held in Auckland during October 2015 and organized by the New Zealand Government Ministry for Primary Industries. It provides a summary of the Forum’s focus on Food Protection concepts that were presented in four specific areas including Food Safety Culture, Food Fraud, Food Defence and Food Chain Transparency.

There is a continuum of food risks and associated countermeasures that are interdependent and by eliminating one risk, the overall system is strengthened. Key to success is ensuring that any intervention facilitates and enables continuous improvements while ensuring the weakest links in the system are identified and eliminated. In summary terms, implementing a behavior-based food safety culture as a strategic intervention and system foundational layer, combined with targeted preventative countermeasures will reduce vulnerability and risk.² Recommendations are provided as a baseline for reviewing, selecting, and implementing interventions that reduce the human health hazards, increase the economic viability of food protection programs, and ultimately increase trust in the food system.

Each heading below notes the applicable session number and links to the associated video recording³ of the presentation as well as panel discussions.

2. Background

Food Protection is a broad concept that has evolved from protection against physical attacks within a facility, to a myriad of physical product and packaging improvements. Depending on the specific scope, Food Protection can include protection from attacks, protection from safety hazards, protection from damage, protection from fraud and counterfeiting, and protecting the continuous supply of products. There has been a range of concepts that are addressed under Food Protection including Food Quality, Food Safety, Food Defence, and Food Fraud (see⁴).

Efforts to-date by government regulators have largely focused on strengthening public health related (e.g. illnesses or deaths) Food Safety policy and related enforcement to deter issues during production and also ensure detection of trade in unsafe food products. However, with continuing growth in reportable incidents and trade agreements such as the Trans-Pacific Partnership (TPP), there is a need to expand focus and activities. To be clear, building and strengthening strong partnerships between the public and private sectors at the national, regional, and international levels is essential to consumer safety, domestic economic health, global trade, and maintaining trust in *brand New Zealand*.

An online search for New Zealand specific Food Protection related incidents yields stories about milk powder⁵, kiwifruit⁶, honey⁷, product recalls⁸, and threats to contaminate food items⁹ -- readily confirming the need for a comprehensive and proactive approach with strategies aimed at addressing specific elements of these issues.

Overall, there has been a proactive shift in focus for risk analysis towards vulnerability assessments to prevent Food Fraud or ‘test the process not the product’ (of course the end product is still tested but now as a confirmation not as the process control step). This is consistent with quality management systems such as Six Sigma for food quality, Hazard Analysis and Critical Control Point

(HACCP) for Food Safety -- including the preventive risk assessment United States Food and Drug Administration (FDA) concept of Hazard Analysis and Risk-Based Preventive Controls (HARPC), the CARVER plus Shock¹⁰ or Food Defense Plan Builder method. While these intervention methods are theoretically sound and putting them into practice necessitates a behavior-based Food Safety culture so as to truly reduce the risk to human health and safety.

This report will present the subjects in the order they were presented at the MPI Food Protection Forum.

3. The Driving Force for Change (Session 1)

The global food supply chain is very complex and consumers have become more aware, concerned, and involved with many aspects of 'producer-to-plate' or 'farm-to-fork' including questioning credence labels such as 'natural' or 'fair trade.' Consumer sensitivity research¹¹ in the United States indicates that trust is enhanced when a deeper level of transparency by food brand owners about their sustainability practices, supplier ethical standards (anti-slavery and workplace conditions), sourcing/fair trade, ingredients, allergens, and Food Protection practices is made available to them.

Other important changes to the food industry include:

- **More precise testing equipment** is being distributed around the globe which has the effect of increasing the ability to isolate and identify hazard source(s) leaving little or no room for doubt as to the source of fraud and/or unsafe food.
 - **Globalization of supply** continues to expand and therefore, there has been an acceleration of complexity in food supply chains enabling both ingredients and finished products to ship in greater quantities to/from every corner of the globe. Consequently, both the chance of getting caught as well as potential for 'hazards' are increasing exponentially.
 - **Communication, internet and social media** contributing to much faster, wider, and deeper coverage and amplification of food related issues on the internet has increased consumer awareness and made them more sensitive to global issues, particularly as related to product safety, authenticity, ethical sourcing and sustainability. As social media platforms continue to enable consumer-to-consumer dialogue, trust in a product, brand, company, or producing country can be earned or lost with a mouse click and without the consumers ever purchasing/consuming the product.
 - **Consumer demand for transparency**, related to the above, includes the 'who, what, when, where and how' of food products they purchase, brand owners must focus much more on building and maintaining trust through enhanced food chain communication.
- Expanded audits and verification** has strengthened supply contracts and operating parameters in supplier-buyer relationships. However, to eliminate blind-spots and vulnerabilities in complex global food chains, food producing companies are seeking reviews and science-based evidence from credible sources.
- **Food chain transparency** is a key enabler of consumer trust and it may become the 'admission ticket' into the food supply chain for those who grow, process, manufacture, distribute, sell,

prepare, and serve food. Brand owners and food service alike are committing themselves to transparency to demonstrate to the market how consumer-oriented they are¹².

Again, Food Protection is essentially concerned with the physical product and incorporates the key concepts of Food Quality, Food Safety, Food Fraud, and Food Defence. Figure 1 below illustrates these key concepts and the interdependency with Food Security, Transparency, and Trust. Effective Food Protection will reduce unnecessary food loss and waste and benefits Food Security. Transparency across all of these key concepts facilitates and enhances trust between trading partners and consumers.

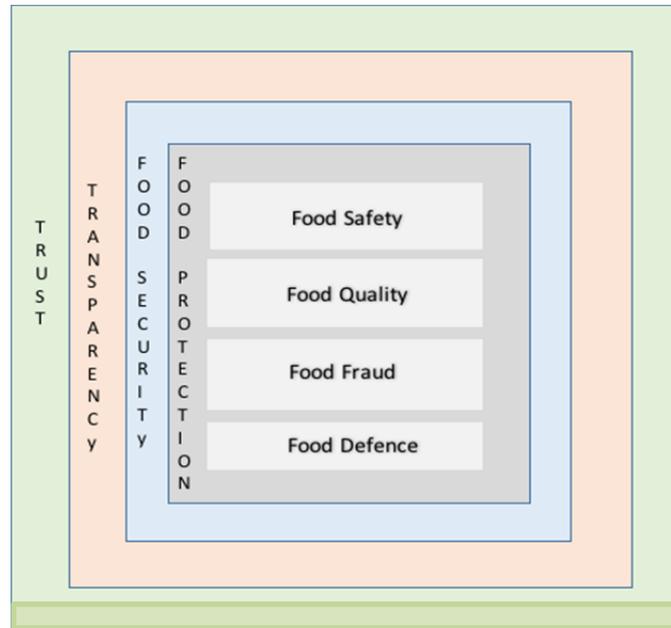


Figure 1 – Food Supply Interdependency¹³

Food Security is “when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life” (World Health Organisation, 1996).¹⁴ Reduction of unnecessary food loss and waste can be included under the definition. Food Security has become an important overarching concept for the food supply chain including industry and government. As economies grow, and as consumer preferences change, there will be a shift in focus from “calories” to “quality calories.”

Summary Points:

- A. Consumer trust is enhanced through supply chain transparency;
- B. Industry cannot afford to cut corners in the face of increased competition;
- C. Public-private partnerships (PPPs) are essential.

Resources from the MPI conference include:

- Martyn Dunne, NZ MPI Director-General - <https://youtu.be/XeIFjvVOxG4>
- Hon Jo Goodhew, NZ Minister for Food Safety - <https://youtu.be/K1DORjcyA78>

4. Food Safety Culture (Session 2)

A Food Safety Programme or Food Safety Management System isn't enough. There is a shift from trying to predict the future of Food Safety, but instead attempt to shape it by understanding and learning from the past. This said, there is pressure on the food industry to return to minimal processing and preservation, e.g., unpasteurized juices and milk. Furthermore, the food system continues to become more and more complex with unique risks.

Recognizing that Food Protection is critical to the wellbeing of the enterprise and raising awareness at all levels within an organization are essential first steps.

Resources from the MPI conference include:

- Frank Yiannas, Vice President, - Food Safety Walmart and author of 'Food Safety Culture' - <https://youtu.be/7B-Koptpzn4>
- Alan Reilly, Adjunct Professor, Institute of Food and Health, University College, Dublin and former Chief Executive of the Food Safety Authority of Ireland - <https://youtu.be/Ljgwlgdm0Gw>
- John Keogh, President and Principal Advisor, Shantalla Inc. (panel discussion) - <https://youtu.be/JemR3f3upJQ>

5. Food Defence and Food Fraud (Session 3)

There are many ways to categorize the wide range of Food Protection concepts and related risks. The Food Risk Matrix defines the motivation – the cause not just the effect – different types of risks (Figure 2). This matrix was first published in the *Journal of Food Science* and has been utilized in a range of publications such as GFSI (Global Food Safety Initiative) and Chinese National Center for Food Safety Risk Assessment (CFSA) presentations. Food Fraud is unique since the root cause is “economic gain” but the effect could potentially include a human health hazard.

Food Quality	Food Fraud	Motivation Gain: Economic
Food Safety	Food Defence	Harm: Public Health, Economic, or Terror
Unintentional	Intentional	
Action		

Figure 2: The Food Risk Matrix - reprinted with permission from Spink & Moyer, 2011¹⁵

Furthermore, the food risks could be acute, chronic, or only technical (see Table 1).

Discipline Risk Type	Example	Cause and Motivation	Effect	Public Health Risk Type	Secondary Effect
Food Quality	Accidental bruising of fruit	Mishandling	Unsaleable product or possible additional contamination with E. coli O157:H7	None or Food Safety	Reduced brand equity or Food Safety incident
Food Fraud	Intentional adulteration of milk with melamine	Increased margin	Toxic poisonings	Food Safety	Public fear and possible lower prices industry-wide
Food Safety	Unintentional contamination of raw vegetables with E. coli O157:H7	Limited field protection and control during harvesting and processing	Illnesses and/or deaths	Food Safety	Damaged industry, recall expense, and public fear
Food Defence	Intentional contamination of ground beef with nicotine	Revenge intent against the store/manager through injury to consumers	Non-lethal poisonings	Food Defense	Adulterated product, damaged industry, recall expense, and public fear

Table 1: Risk cause and effects for the food sector - reprinted with permission from Spink & Moyer, 2011¹⁶

Before elaborating on the types of Food Protection risks it is important to review the process of prevention, intervention, and response. This is based on FDA food protection concepts. While the goal is prevention, the starting point for addressing a new risk is at the intervention stage. When addressing a new or emerging risk is -- and after a successful intervention and response -- the focus can shift to prevention (Figure 3).

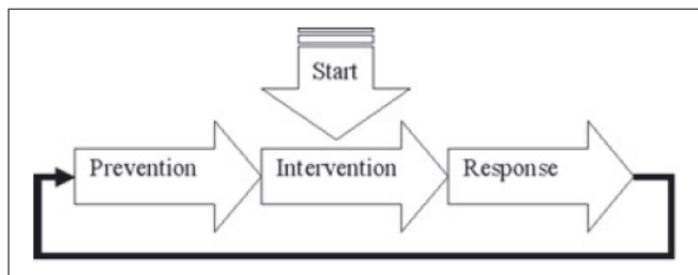


Figure 3: Food Protection Plan Progression - reprinted with permission from Spink & Moyer, 2011¹⁷

Food Quality can be defined as a product that is both saleable and generally meets the level and/or specification(s) of the consumer/buyer. This said, depending on the buyer, there may be a specific aspect of Food Quality that is prioritized.

- A manufacturer may define this as processing attributes (supports consistent flavor or processing);
- A standard or certification body may define it as adherence to a specification;
- A food public health professional may define it as not causing an illness; and
- A consumer may equate “quality” with “premium.” There are often regulatory or contractual definitions of acceptable quality levels.

Focus: The focus should be on first clearly defining the specification and expectation for quality levels. Once these are established, there can be concentrated efforts to increase the specifications. Increasing specifications should in turn, increase consumer demand and the price of the products.

Food Safety is the supply of finished products or ingredients free from contamination and ensuring consumers are not exposed to illness/death risks.

Focus: The focus should be on preventive controls to reduce the potential for a human health hazard.

Food Defence broadly addresses the food system’s resilience to intentional attacks intended to cause harm. Harm may be economic, public health, or terror related. Specifically the US FDA, within the Intentional Adulteration section of the Food Safety Modernization Act (FSMA), defines Food Defence as protecting against “catastrophic events” and specifically terrorism. By FSMA-IA definitions this does not include “disgruntled employees” or “malicious tampering.”

In New Zealand, a specific example would be the November 2014 threat to contaminate infant and other formula with the pesticide 1080, unless the government stopped using 1080. MPI, other government agencies, and industry worked quickly to protect consumers and ensure formula was safe. A man was arrested and charged in October 2015. On 23 March 2016 he was sentenced to 8.5 years in jail for 2 charges of attempted blackmail.¹⁸ This case is complex and there seemed to be multiple motives which would lead this case to be both Food Defence and Food Fraud. During the trial it was found that the attacker had a commercial interest in a competing product to 1080, and if 1080 was banned, the attacker would achieve ‘economic gain’.

Focus: The focus is on conducting a vulnerability assessment and putting countermeasures in place to reduce the opportunity for an attack as well as to mitigate consequences if an incident does occur.

Food Fraud focuses on protecting consumers from illegal intentional acts to deceive. Food Fraud is one of the most recent and urgent food industry topics. While the laws, regulations, standards and certifications are only now being developed, there is extensive, global collaboration. For example, GFSI has included Food Fraud prevention requirements in their Food Safety Management System certification. Addressing Food Fraud is **not** optional – GFSI has stated that addressing Food Fraud is critical to Food Safety. Also, addressing all “agents” that contribute to a “hazard” based on an incident

that is “economically motivated” will be a requirement for the USA Food Safety Modernization Act – essentially a requirement to at least conduct a Food Fraud Vulnerability Assessment and implement a control plan for hazards that are identified.

Focus: The focus should be on a Food Fraud Vulnerability Assessment that covers all products and then a Food Fraud Prevention Strategy that is linked to enterprise-wide risk assessments

Resources from the MPI conference include:

- Dr. John W Larkin Research Director of the National Center for Food Protection and Defense (NCFPD), Homeland Security Center - <https://youtu.be/zWry8OwQPwg>
- Dr. John Spink, Director and Assistant Professor, Food Fraud Initiative, Michigan State University - <https://youtu.be/Jb4mZPmkFL0>
- John Keogh, President and Principal Advisor, Shantalla Inc. (panel discussion) - <https://youtu.be/H8WrASrThtI>

6. Public Private Partnership (Session 4)

Many of the world’s country laws and regulations emphasize the importance of government’s working with industry to focus more effort on prevention in addition to compliance. The joint activities of governments and industry are referred to as a “public-private partnership” - governments as public institutions (agents) and industry as private institutions. In these engagements, other stakeholders are often involved such as non-governmental organizations (NGOs), trade associations, consumer advocacy groups, and academics.

Food Safety and related topics such as food traceability and Food Defence are often the focus of these partnerships. For example, the U.S. Pharmacopeia (USP) has created a series of volunteer expert panels and committees to develop new methods and standards. Another example is the Grocery Manufacturers’ Association (GMA) working group on Food Defence with a committee focused on Food Fraud (Economically Motivated Adulteration). And GFSI created a Food Fraud Think Tank that supports their certification for Food Safety, and now Food Fraud.

Another key public-private partnership involving the New Zealand government as a key driver is within an Asia Pacific Economic Cooperation (APEC) forum. Working alongside the APEC Business Advisory Council (ABAC), the New Zealand government has been instrumental in driving a project called Global Data Standards (GDS). This project was approved by APEC political leaders at the Bali summit in 2013 and essentially aims to reuse industry product data to reduce supply chain bottlenecks. One example of a data standard is the unique product identifier called the global trade identification number (GTIN) that is embedded in point-of-sale barcodes. Pilots are taking place in 2016 across several countries.

The concept of Food Protection Steering Committee (FPSC) has been developed and adopted even from the National level to a US State. To demonstrate the potential success, an example from a US State will be provided here.

One successful example of a local public-private partnership is the US State of Michigan group that focuses on Food Protection Steering Committee. This group was formed in 2002 after the US terrorist attacks on September 11, 2001. The FDA created funding for Food Defense networks. The activities in Michigan include quarterly government/industry/association/ academia meetings to address current issues and share information. The intent is to build strong relationships that lead to coordination, communication, and efficiency when developing new policies or addressing a crisis. This has created a safe and trusted forum for collaboration.

GFSI Food Safety Management System

Before moving on it is important to elaborate on GFSI and the requirements. Originally the GFSI was created by a group of industry CEOs from the Consumer Goods Forum (CGF) to help optimize and harmonize food safety standards. Due to this broad engagement and commitment, GFSI is the largest industry Food Safety initiative. “Scheme Owners” — such as British Retail Consortium (BRC), Food Safety System Certification (FSSC,) and others — develop food safety standards. ‘Auditors’ such as NSF International¹⁹ and others certify that food manufacturers meet the requirements. The auditors are defined and accredited to perform ‘third-party audits’ (a first-party audit would be done by the food company and a second-party audit would be conducted by a consultant engaged to provide recommendations to the brand owner/company).

GFSI efforts began by considering the wide variety of regulations that were required by any countries or companies. The regulations and standards created the mission and scope of the GFSI requirements which are presented in the GFSI Guidance Document. This document details ‘The Idea’ or expected scope (Figure 4). Next, standard setting organizations called Scheme Owners create ‘The Standards.’ Manufactures and producers then implement these standards. Finally, there are certification bodies or auditors that conduct ‘third-party audits’ to certify that the standards are being properly implemented (noted in the figure as ‘confirmed’). Ultimately, if a government regulator requires a process for conducting a Food Fraud Vulnerability Assessment and mitigation/prevention plan, a mechanism would already be in place and the rules/policies would simply reinforce the process. In short, the government regulators would be requiring a process but not be explicitly endorsing GFSI or any other system.

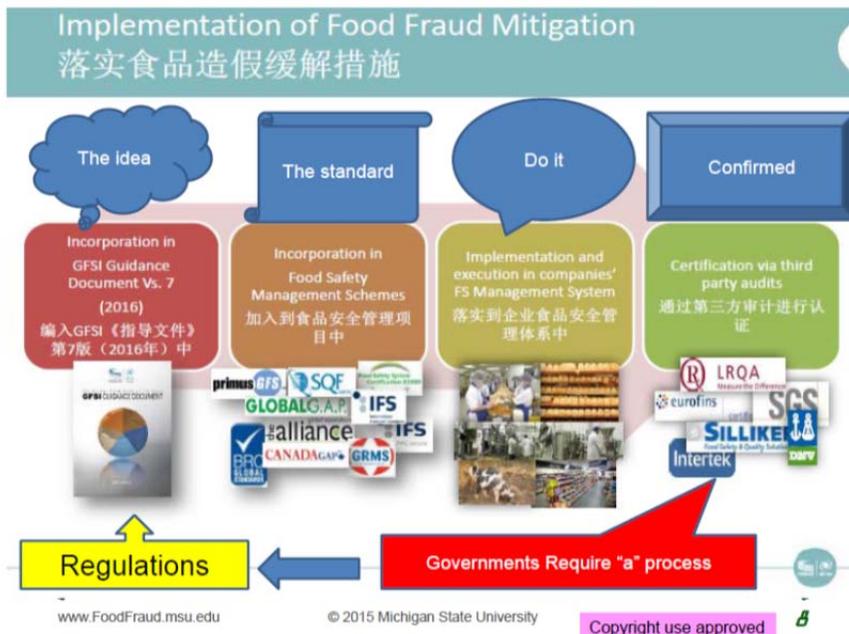


Figure 4: Global Food Safety Initiative (GFSI) System for the Food Safety Management System, Standard, Implementation, Certification, and Contribution to Regulations²⁰

In 2012, GFSI created a Food Fraud Think Tank that developed a position paper on Food Fraud Prevention that was adopted in 2013. GFSI will include Food Fraud requirements in their next guidance document due to be published in 2016 and compliance will be required in 2017. Some scheme owners are planning to audit against Food Fraud prevention requirements as early as August 2015, e.g., 'BRC Issue 7.'

In January 2016, the Canadian Food Safety Agency acknowledged its support for private standards such as GFSI to improve the food system. Key GFSI Food Fraud Requirements are:

- Food Fraud Vulnerability Assessment;
- Food Fraud Prevention Plan;
- Management Buy-in.

Resources from the MPI conference include:

- Jim Flannery, Senior Executive Vice President, Operations and Industry Collaboration, Grocery Manufacturers Association - <https://youtu.be/eDD5aMPVDCg>
- Captain David Morgan, Chief Flight Operations and Safety Officer, Air New Zealand - <https://youtu.be/Bx6LTuNoTwM>
- Greg Gent (Chair), NZ Dairy Capability Working Group - <https://youtu.be/9I710-YR9Vs>
- Scott Gallacher, Deputy Director-General, Regulation & Assurance, Ministry for Primary Industries - <https://youtu.be/rRO8IGFMJkk>

- John Keogh, President and Principal Advisor, Shantalla Inc. (panel discussion) - <https://youtu.be/tNRcQKiX2eM>
- Frank Yiannas, Vice President, Food Safety Walmart - <https://youtu.be/7B-Koptpzn4>

7. Conclusion/Direction

The New Zealand MPI Forum provided an opportunity to gather a wide-range of international experts to share insight that applies specifically to Food Protection in New Zealand. New Zealand has an opportunity – and now the awareness – to take major steps in coordinating a world-leading, national Food Protection Strategy.

- Collaboration (including public-private partnerships) and Culture Change are the most efficient and effective way to broadly protect the food supply and source economies, as well as achieve and sustain consumer confidence.
- Transparency is a vital tool to facilitate consumer trust. Moreover, it can enhance trading relationships and reduce conflicts amongst stakeholders and may help to fast track goods through borders.
- Companies should map their supply chains from end-to-end as a basis for understanding key processes and providing a baseline for vulnerability assessment.

The first step is to create a task force or working group to develop the policy, vision for a strategy, and an implementation plan.²¹²² The strategy should consider current and possible resources that can be mobilized to focus on this issue. Importantly, the Food Protection Strategy does not need to be complex or resource intensive if there is a focus on optimizing current activities.

8. References & Endnotes:

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- ² Yiannas, Frank (2015). MPI Session 2 Presentation – “Developing a Corporate Food Safety Culture”.
- ³ <https://www.youtube.com/user/MinPrimaryIndustries/videos>; accessed June 28, 2016.
- ⁴ Spink, J., & Moyer, D. C. (2011). Defining the Public Health Threat of Food Fraud. *Journal of Food Science*, 76(9), R157–R163.
- ⁵ http://www.nzherald.co.nz/business/news/article.cfm?c_id=3&objectid=10532797; accessed June 28, 2016.
- ⁶ <http://thesilkinitiative.com/three-things-your-business-needs-to-learn-from-zespris-brand-fraud-experience/>; accessed June 28, 2016.
- ⁷ http://www.nzherald.co.nz/business/news/article.cfm?c_id=3&objectid=11113964; accessed June 28, 2016.
- ⁸ <https://www.consumer.org.nz/articles/recalls-archive#article-2015>; accessed June 28, 2016.
- ⁹ <http://www.police.govt.nz/operation-concord-1080-blackmail-threat-investigation>; accessed June 28, 2016.
- ¹⁰ The CARVER plus Shock method is an offensive targeting prioritization tool that has been adapted for use in the food sector. This tool can be used to assess the vulnerabilities within a system or infrastructure to an attack. It allows you to think like an attacker by identifying the most attractive targets for attack. By conducting such a vulnerability assessment and determining the most vulnerable points in your infrastructure, you can then focus your resources on protecting your most vulnerable points.
- CARVER is an acronym for the following six attributes used to evaluate the attractiveness of a target for attack:
- **Criticality** - measure of public health and economic impacts of an attack
 - **Accessibility** – ability to physically access and egress from target
 - **Recuperability** – ability of system to recover from an attack
 - **Vulnerability** – ease of accomplishing attack
 - **Effect** – amount of direct loss from an attack as measured by loss in production
 - **Recognizability** – ease of identifying target
- Source:** <http://www.fda.gov/Food/FoodDefense/FoodDefensePrograms/ucm376791.htm> accessed February 15, 2016.
- ¹¹ The Center for Food Integrity. <http://www.foodintegrity.org/research/consumer-trust-research/current-research/>; accessed January 7, 2016.
- ¹² Katy Askew (March 2014). UK: *Tesco CEO: Harder to win trust in digital era*”. Just-food. Web, http://www.just-food.com/news/harder-to-win-trust-in-digital-era_id126208.aspx. Accessed January 7, 2016.
- ¹³ Keogh, J. (2015). Food Supply Interdependency – unpublished conceptual model.
- ¹⁴ <http://www.who.int/trade/glossary/story028/en/>; accessed April 25, 2016.
- ¹⁵ Spink et al. (2011). Defining the Public Health Threat of Food Fraud. *Journal of Food Science*, 76(9), R157–R163.
- ¹⁶ IBID.
- ¹⁷ IBID.

¹⁸ <http://www.mpi.govt.nz/protection-and-response/responding/1080-blackmail-threat/>, accessed June 28, 2016.

¹⁹ See <http://www.nsf.org/>; accessed June 28, 2016.

²⁰ Spink, J., Fortin, N. D., Moyer, D. C., Miao, H., & Wu, Y. (2016). Food Fraud Prevention: Policy, Strategy, and Decision-Making—Implementation Steps for a Government Agency or Industry. *CHIMIA International Journal for Chemistry*, 70(5), 320-328.

²¹ IBID.

²² Spink, J, Moyer, DC, & PENDING, (Under Review). The Role of the Public Private Partnership in Food Fraud Prevention – includes implementing the Strategy, Current Opinions in Food Science, Volume 00, Number 00, Pages 00-00.

9. Additional Selected Readings:

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- Manning, Louise and Jan Mei Soon, Food Safety, Food Fraud, and Food Defense: A Fast Evolving Literature. *Journal of food science*, 2016. 81(4): p. R823-R834.
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- Moyer, Douglas C, Jonathan W DeVries, and John Spink, The economics of a food fraud incident—Case studies and examples including Melamine in Wheat Gluten. *Food Control*, 2017. 71: p. 358-364.
- Shears, P., Food fraud—a current issue but an old problem. *British Food Journal*, 2010. 112(2): p. 198-213.
- Spink, J, CT Elliott, and KP Swoffer, Defining food fraud prevention to align food science and technology resources, *Food Science & Technology*, the Journal of the Institute of Food Science and Technology, Volume 27 (Number 4), December, pp xx-xx. [<https://fstjournal.org/features/27-4/food-fraud.2013>].

10. Appendix A: New Zealand Food Protection Forum Agenda

MPI FOOD PROTECTION FORUM

12TH OCTOBER 2015 – THE PULLMAN HOTEL, AUCKLAND

Ministry for Primary Industries
Manatū Ahu Matua



<p>7.30am Registration and breakfast</p> <div style="background-color: #e0e0e0; padding: 5px; margin: 5px 0;">SESSION 1 The driving forces for change</div> <p>8.30am - 9.30am Welcome and opening: Martyn Dunne – MPI Director-General Keynote speaker: Hon Jo Goodhew – Minister for Food Safety Keynote speaker: Vice Minister Teng Jiakai – Chinese Food and Drug Administration</p> <div style="background-color: #e0e0e0; padding: 5px; margin: 5px 0;">SESSION 2 Food Safety Culture</div> <p>9.30am - 11.10am Frank Yiannas – Author Food Safety Culture and VP Food Safety Wal-Mart Industry perspective: Developing a corporate food safety culture Prof. Alan Reilly – Adjunct professor, Institute of Food and Health, University College, Dublin and former Chief Executive of the Food Safety Authority of Ireland. Food Crisis Management: implications for regulators – Lessons learnt from the EU-wide horsemeat scandal Food safety culture panel discussion. Chair John Keogh.</p>	<p>11.10am - 11.40am Morning break and refreshments</p> <div style="background-color: #e0e0e0; padding: 5px; margin: 5px 0;">SESSION 3 Food Defence</div> <p>11.40am - 1.10pm Dr John W Larkin – Research Director of the National Centre for Food Protection and Defence (NCFPD), part of the Homeland Security Centre. Dr John Spink – Director and Assistant Professor, Food Fraud Initiative, Michigan State University Food Defence: What is it, why is it important, why now? Food defence panel discussion: Chair John Keogh</p> <p>1.10pm - 2.30pm Lunch</p> <div style="background-color: #e0e0e0; padding: 5px; margin: 5px 0;">SESSION 4 Partnering to enhance our Food Safety Culture</div> <p>2.30pm - 5.15pm Jim Flannery – Senior Executive Vice President, Operations and Industry Collaboration, Grocery Manufacturers Association Findings from Consumer Information Transparency initiative Air New Zealand: Capt David Morgan Safety Management Dairy Capability Working Group: Greg Gent Industry perspective Ministry for Primary Industries: Scott Gallacher Government approach Partnership Panel Discussion: Chair John Keogh Forum close: Martyn Dunne Networking Reception</p>
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11. About MSU's Food Fraud Initiative

Within the College of Veterinary Medicine at Michigan State University, the Food Fraud Initiative is a research team focused on policy and strategy for reducing the fraud opportunity for human and animal food and medicines. The research team expands across and interdisciplinary team at MSU and other US and international Universities. The FFI offerings include numerous scholarly publications, graduate courses, executive education/ short courses, a Food Fraud MOOC (a free massive open online course offered twice a year), and numerous presentations and training sessions. The FFI offerings include graduate courses, executive education/ short courses, a Food Fraud MOOC (a free massive open online course offered twice a year), and numerous presentations and training sessions.

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