

The Supply Chain – Ranking Suppliers and Monitoring Execution of Food Safety Specifications

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Updated video that was
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Rosemont, Illinois

Thu, May 12, 2022

2:45 to 4:00 CT



Food Fraud Prevention Think Tank: Our Resources

Textbook: Food Fraud Prevention (Spink, 2019)

Massive Open Online Course (MOOC – free, open, online)

- With a ‘**certificate of completion**’ based on **assessments**
 - On-demand, ten professional training hours
1. Food Fraud Prevention Overview MOOC
 2. Food Fraud Prevention Audit Guide MOOC
 3. Food Defense Threat Audit Guide MOOC
 4. Food Fraud Vulnerability Assessment & Prevention Strategy (VACCP)
 5. *Developing an Organic Fraud Prevention Plan (with OTA)*
 6. *Food Fraud & Enterprise Risk Management (ERM)*
 7. *Food Fraud Supply Chain Management & Procurement <NEW>*
 8. *Food Fraud – Advanced Criminology (for OPSON) <NEW>*

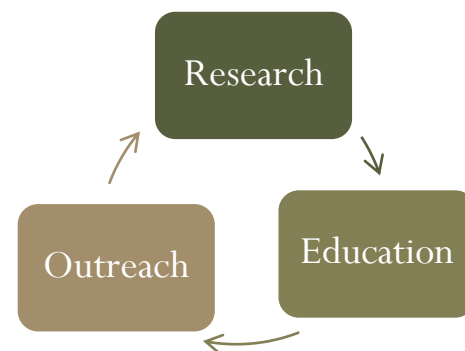
Also:

1. *USDA NOP – Organic Fraud and the Criminal Mind (See USDA.gov)*
2. *USDA NOP – Preventing Organic Product Fraud (See USDA.gov)*

Executive Education: **July 24 – 28, 2023; Oct-23; Jan-24** (Detroit area)

- (Includes invitation-only/ brand owner-only sessions)
1. Food Fraud Overview
 2. Food Fraud Implementation Strategy (FFVA/FFIS, FFPS)
 3. Food Prevention Annual Update

Reports, Primer Documents, Scholarly Works, Videos and Training



Link to Textbook:

<http://www.anrdoezrs.net/links/9101220/type/dlg/https://www.springer.com/us/book/9781493996193>

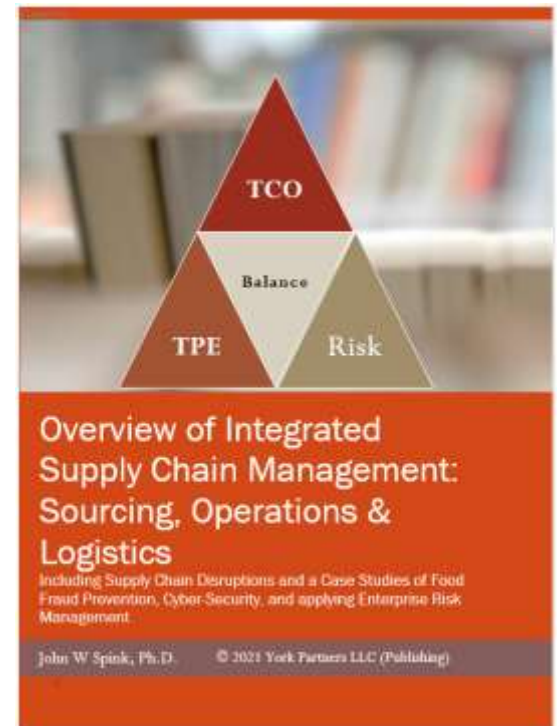
Resources: Supply Chain Management Book

NEW BOOK, subscribe for updates

Integrated Supply Chain Management – Source, Operation & Logistics

- Including Supply Chain Disruptions and a
- Case Study of Food Fraud Prevention, and
- Applying Enterprise Risk Management
- Required reading in MSU SCM undergraduate courses (all MSU business school students)
- Supply Chain Management teaching Supply Chain Managers about best practices in Supply Chain Management.

For an update: <https://www.foodfraudpreventionthinktank.com/subscribe/>





Integrated Supply Chain Management (ISCM)

What is Supply Chain Management

- *...it's not just purchasing manager's who don't listen to you.*
- It's managing the movement of everything from everywhere to everywhere...
- At anytime, anything can go wrong that shuts down your entire company:
 - Suez Canal
 - Texas ice storm
 - Computer chips shortage for cars
 - COVID for... everything...
 - India shut down again... what about new future disruptions...
 - *...or quality issues such as food safety incidents.*

Michigan State University
Department of Supply Chain
Management
Business College

- Bachelors, MS and PhD Programs
 - #1 Undergraduate Program
 - #1 Research Productivity
- Integrated Supply Chain: sourcing, operations, logistics and the engagement
- Introduction to Supply Chain Management: required for all business students, 2500 students per year, integrated concepts applied to all business areas: finance, accounting, human resources, marketing, management, etc.

Balance of Activities

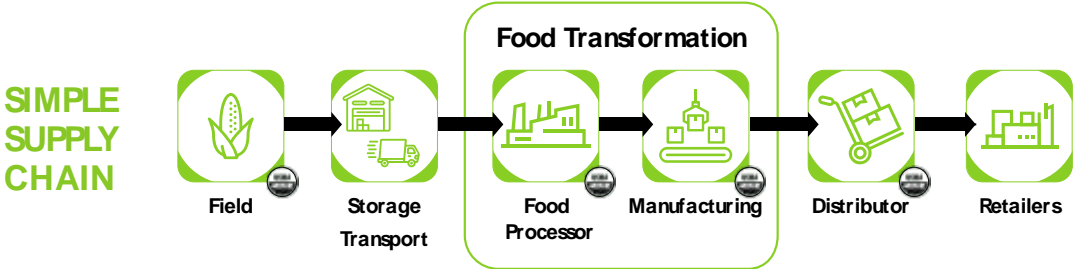
The Enterprise

- Operations
- Sourcing & Procurement
- Logistics
- Customer Service
- Functions: Risk Management, Quality, Sustainability, CSR, etc.

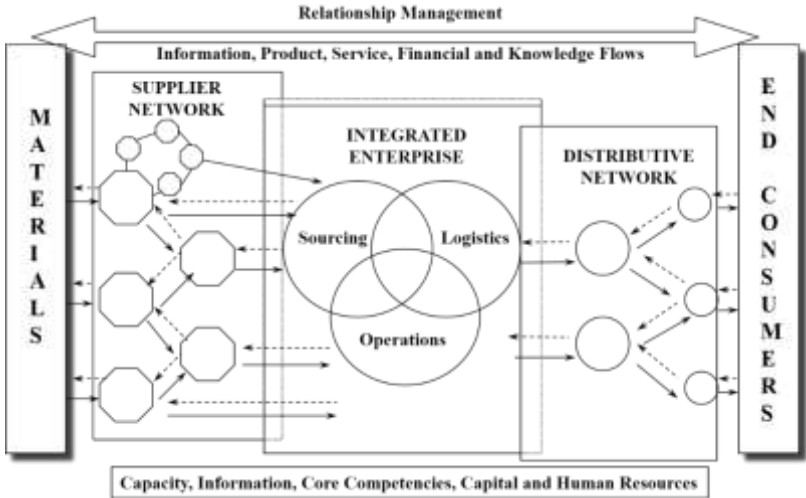


THE INTEGRATED SUPPLY CHAIN:

A web not a path

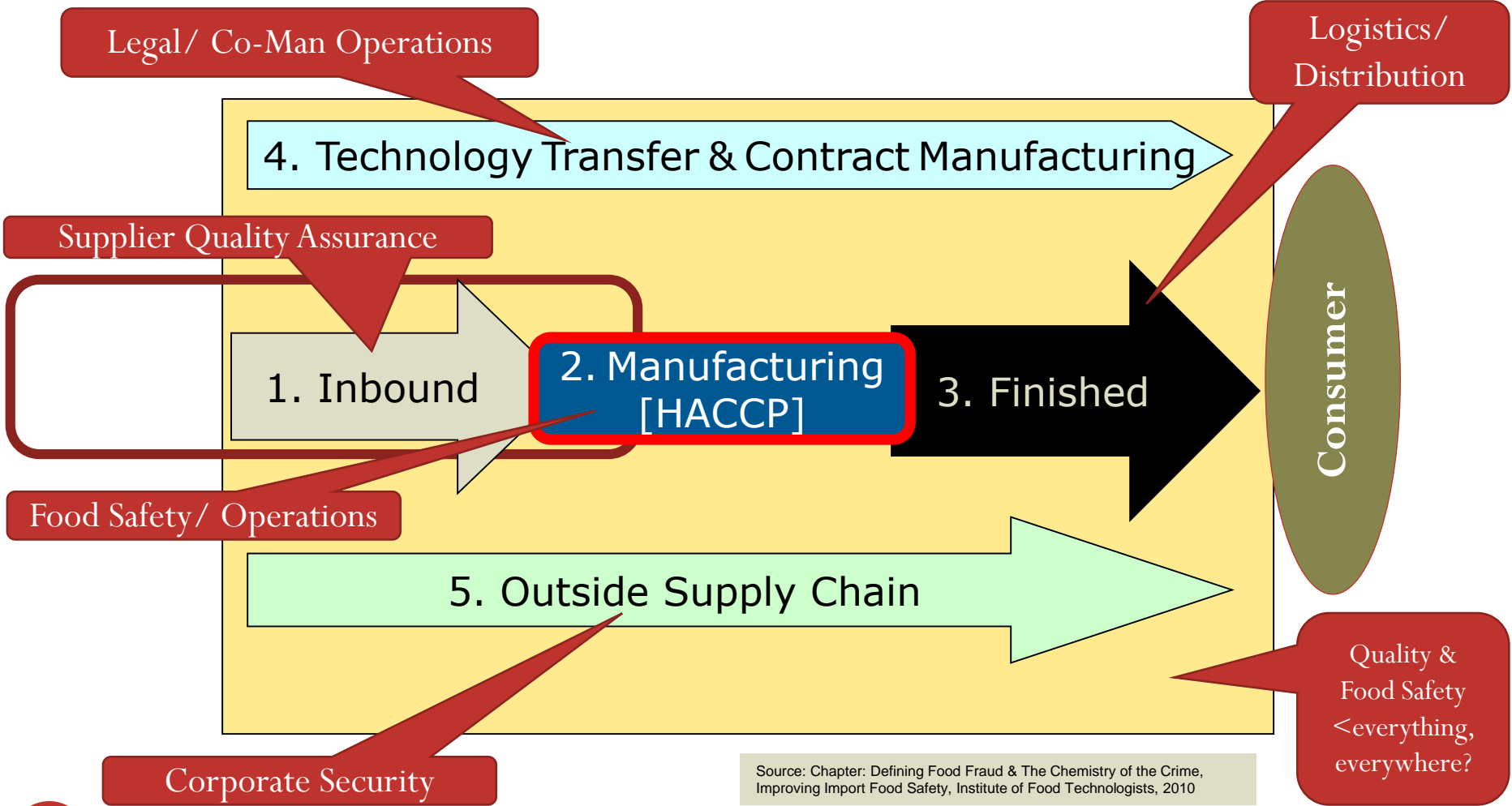


Source: Organic Trade Association



Source: Bowersox, 2020

Food Supply Chain Management Accountability



Source: Chapter: Defining Food Fraud & The Chemistry of the Crime, Improving Import Food Safety, Institute of Food Technologists, 2010

Supply Chain Management Basics

Efficient communication starts with understanding THEIR system and using THEIR terminology...

From the supply chain management literature:

- ***Supply Chain Risk***: “the likelihood and impact of unexpected macro and/or micro-level events or conditions that adversely influence any part of a supply chain leading to operational, tactical, or strategic level failures or irregularities.” (RefC)
- ***Supply Chain Disruption***: ‘unplanned and unanticipated (event) that disrupts the normal flow of goods and materials within a supply chain.’
[(RefB) citing (Craighead et al., 2007)]
- ***Supply Chain Risk Management (SCRM)***: “is the process of identifying, assessing, and mitigating the risks to the integrity, trustworthiness, and authenticity of products and services within the supply chain.” (RefX)
 - This is implemented in a formal and integrated plan that support Advanced Planning & Scheduling (APS), Sales & Operations Planning (S&OP), Manufacturing Scheduling, Logistics Scheduling, and into corporate financial and accounting systems.

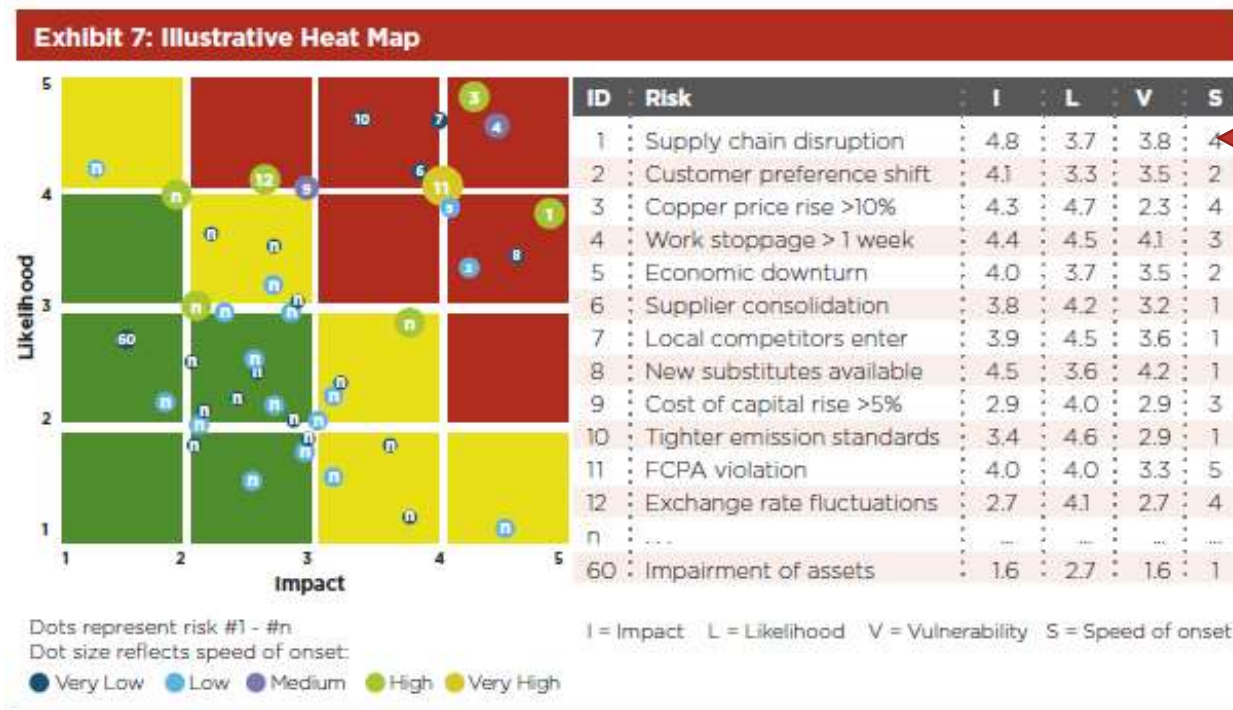
*So, is Supply Chain risk a problem? Supply
Chain disruption*

COSO/ERM report

- Illustrative Heat Map
- #1 – Supply Chain Disruption



Ref: COSO (2020), Risk Management in Practice





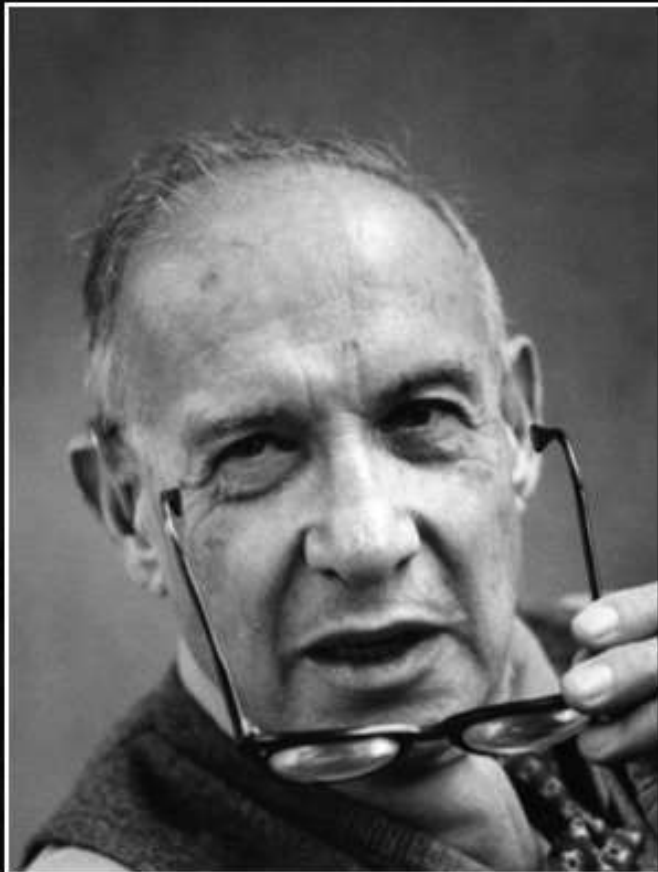
Food Safety Governance



Modernized FSQ risk management

DR. VERA PETROVA DICKINSON

INNOVA-Q



You can't manage what you don't
measure.

— *Peter Drucker* —

AZ QUOTES

**The electric light did not come from the
continuous improvement of the candle.**

~ Oren Harari



Can we learn from other industries?

AUTOMOTIVE INDUSTRY LEARNINGS:

- Quality is embedded WITHIN each **supply chain process**
- Application of TECHNOLOGY during **design** process
- ENGINEERING (not FSQ) is at the center of feedback during pre-production phase
- Rigorous testing process, use of technology to monitor issues BEFORE production scales up
- **Careful data analysis for real-time and predictive purposes**

What are we missing?



Quality Risk Prevention Programs

- | | | | | | |
|--|--|---|--|---|---|
| <ul style="list-style-type: none"> • FSQ in Design • Specifications • HACCP/FSP • Allergen Mgmt • Supplier QA • Plant & Equipment Design/Capability • Package Integrity | <ul style="list-style-type: none"> • Contracts • Selection/Approval • Material Monitoring • Continuous Improvement | <ul style="list-style-type: none"> • Specifications • HACCP/FSP • Supplier QA • Traceability • Sanitation & Allergen Control • Complaint Mgmt • Process Capability/Lean Six Sigma • Infrastructure Investment • FS Culture | <ul style="list-style-type: none"> • Traceability • Warehouse Controls | <ul style="list-style-type: none"> • Complaints • Warehouse Control | <ul style="list-style-type: none"> • Specification • Labelling • Consumer Feedback • Process Capabilities |
|--|--|---|--|---|---|

[From: food_quality.png \(880 x 222\) \(wordpress.com\)](https://www.wordpress.com)

Key Concepts

- Supply Chain Controls vs. Supplier Controls
- Governance (controls and processes)
- Performance (a measure of success)
- Data and Metrics (what is the question? Do you have data to measure success or support a change in a decision?)
- “How to do it”
- “Hot to start (e.g., tomorrow morning)”

What will change?

- Predictive insights
- Real-time performance data
- Enhance response to outbreaks
- Improve operations
- Improve and prioritize management of human resources and budgets
- Predict and prevent equipment failure

Eliminate immense stress and burden put on FSQ teams

**Reach out for further
collaboration!**

[Dr. Vera Petrova Dickinson |
LinkedIn](#)

Managing New Problems:
E.g., Food Fraud Prevention

**What can you expect from
your suppliers???**

Three types of audits



Responses

- **JUST PASS THE AUDIT!!!**
- Meet all the audit requirements
- Meet other compliance requirements (food safety, customs, financial reporting, etc.)
- Meet internal compliance
- Do “enough” for your managers
- Actually protect your company

Three Types of Audits

- Auditor asked no questions
- Auditor asked some questions
- Auditors asked all the questions.
- ...you might have passed but did you really meet the requirement?
- ...you should know and communicate this...

Food Fraud Compliance Requirements

- **GFSI (FSSC, SQF, BRC, IFS, etc.) – January 2018**
 - ~65% of world food trade, core for food safety management system
 - **Required:** Food Fraud Vulnerability Assessment (all fraud)
 - **Required:** Food Fraud Prevention Strategy (all products)
 - **No documents = audit non-conformance**
 - **No certification = no sales (or at least a LOT of explaining)**
- **FSMA-Preventive Controls – September 2016**
 - “The hazard analysis must be written regardless of its outcome” [21CFR507.33 (a)(2)]/ 21CFR117.130
 - “(iii) The hazard may be intentionally introduced for purposes of economic gain.”
- **USDA- Federal Meat Inspection Act, and others – 1906, 1967+**
 - Basic labelling regulations (misbranded, including standards of identify, geographic origin), Product Quality, Grading, and Standards, country-of-origin-labelling (COOL).
- **USDA Organic Foods Production Act & National Organic Program – 1990, 2000**
 - **Required:** Organic System Plan (OSP)
 - **Required:** Recordkeeping
- **Food Drug & Cosmetics Act & Adulterated Foods – 1938**
 - Two sections: Adulterated Foods and Misbranded Foods
- **Sarbanes-Oxley Act – 2002 and 2007**
 - Risks to revenue are disclosed or confirmed to be managed
- **International Standards Organization:**
 - ISO 22200 Food Safety Management, ISO 9000 Quality Management, ISO 28000 Supply Chain Security, ISO 31000 Risk Management, ISO 12931 Product Authenticity
- **Codex Alimentarius:** Electronic Work Group on Food Fraud

Remember:
More than just
GFSI

Food Fraud Compliance Requirements: Scope



“Food Fraud Compliance Requirements — The general compliance requirements for Food Fraud prevention are:

1. Conduct a Food Fraud Vulnerability Assessment (Y/N)
2. Written (Y/N)
3. Create a Food Fraud Prevention Strategy (Y/N)
4. Written (Y/N)
5. ***Demonstrate Implementation (Y/N)***
6. ***Executive Level Sign-off (Y/N)***
7. Minimally conduct an annual Food Fraud Incident Review (Y/N)
8. ***Method to review your incidents and general market incidents (Y/N)***
9. Note: Address all types of Food Fraud (Y/N)
10. Note: Address all products from both incoming goods (e.g., ingredients) and outgoing goods (e.g., finished goods) through to the consumer.” (Y/N)

Reference:

Food Safety Magazine, Feb 2017, “Food Fraud Vulnerability Assessment and Prefilter for FSMA, GFSI and SOX Requirements”, <http://www.foodsafetymagazine.com/magazine-archives/february-march-2017/food-fraud-vulnerability-assessment-and-prefilter-for-fsma-gfsi-and-sox-requirements/>

New Food Magazine, Feb 2017: Food Fraud Prevention – how to start and how much is enough?, <http://www.newfoodmagazine.com/34820/new-food-magazine-post-issues/issue-1-2017/issue-1-2017-digital-version/>

BASIC Procurement and Supply Management requirements for food fraud prevention

- For Your Suppliers

1. Confirm that all suppliers are fully GFSI compliant, including the food fraud sections.
2. Ask to see the supplier's documentation of: (1) food fraud vulnerability assessment, (2) food fraud prevention strategy, and (3) demonstrate implementation through this being included in the supplier's food safety management system.
3. Ask the supplier to confirm they meet all other related aspects of the GFSI food fraud requirements, including procurement and traceability, as well as any specifically applicable requirements such as **for food broker/ agent**, storage and distribution, and internal audit.
4. Confirm the suppliers are GFSI compliant with the traceability and internal audit requirements.
5. Offer training and education resources (such as the entire food fraud prevention MOOC program catalog).

Takeaway Points

- Qualifying
- Monitoring
- First step:
 - How to start?
 - How much is enough?

Discussion

John Spink, PhD

Twitter: [Food Fraud](#) and [#FoodFraud](#)

www.FoodFraudPrevention.com

