

# ***Food Fraud Prevention – Trends Update and Building your Optimal Team***

## **Tanner Lecture 2020**

Chicago Section of IFT (CSIFT) / Monday, May 11, 2020 – 7pm CT

**John Spink, PhD**

Director, Food Fraud Initiative

Assistant Professor, Supply Chain Management

Eli Broad Business College, MSU

- Introduction to Supply Chain Management (SCM 303)
- Procurement and Supply Management (SCM 371)

[WWW.FoodFraudPrevention.com](http://WWW.FoodFraudPrevention.com) Twitter @FoodFraud #FoodFraud



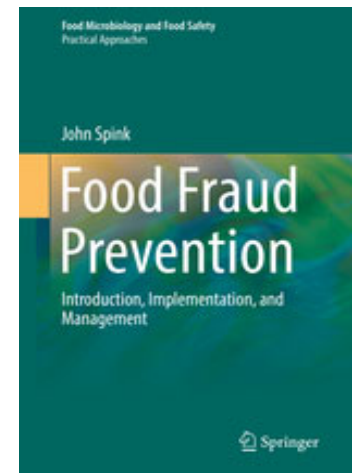
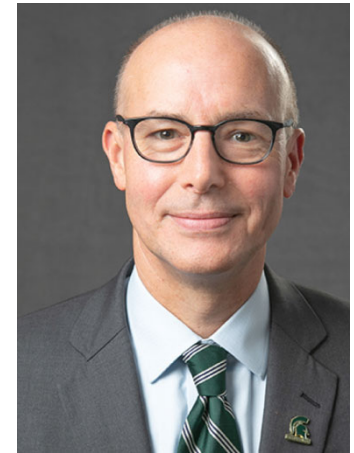
# Reference: Summary

Summary: Food fraud is one of the most urgent and activity food industry areas and there is an increased vulnerability during the current massive supply chain disruption. When dealing with immense change, the food fraud prevention fundamentals still apply and the standard operating procedures give use a roadmap. Over the last two years since the Global Food Safety Initiative (GFSI) compliance requirements were implemented, there has been a continue refinement of the process and the implementation of more formal management systems. A current trend is to formalize the methods and procedures which includes a focus on building your optimal team. This presentation will provide an update of the current best practices, insight on the food fraud prevention cycle and the management systems, and then how to create and empower a fully functioning food fraud prevention strategy and team. In addition, there will be a hot topic update of the COVID-19 related supply chain risk management and recommendations for addressing this specific supply chain disruption.

# Reference: Presenter Bio

Since 2013 Dr. John Spink has been the Director of the Food Fraud Initiative. He is an Assistant Professor in the Department of Supply Chain Management in the Eli Broad Business College at Michigan State University (USA). He is widely published in leading academic journals including “Defining the Public Health Threat of Food Fraud,” “Defining the Types of Counterfeiters, Counterfeiting, and Offender Organizations,” and “Introduction of the Food Fraud Initial Screening Method (FFIS).” His leadership positions include product fraud related activities with “ISO 22000 Food Safety” and “TC292 Security Management/ Fraud Countermeasure,” GFSI Food Fraud Think Tank, and U.S. Pharmacopeia (USP). Global activities include engagements with the European Commission, INTERPOL and Operation Opson, New Zealand MPI, Codex Alimentarius, WHO/FAO, and served as an Advisor on Food Fraud to the Chinese National Center for Food Safety Risk Assessment (CFSA). Before returning to MSU to start his PHD in 2006 he spend 11 years at Chevron Corporation, 2 years at a \$100 million start-up company, and then as an independent consultant. For more please see

[www.FoodFraudPrevention.com](http://www.FoodFraudPrevention.com)



# Food Fraud Prevention 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)



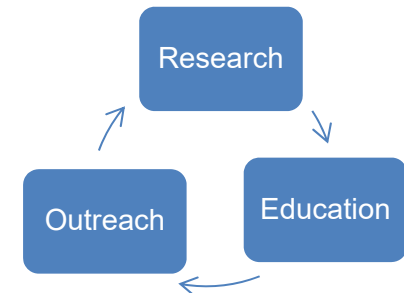
**Executive Education**

(Includes invitation-only/ brand owner-only sessions)

1. Food Fraud Prevention Annual Update
2. Food Fraud Management Strategy
3. Food Fraud Initial Screening FFIS/ FFVA Workshop

**Reports, Primer Documents, and Scholarly Works**

**Videos and Training Links**



Link to Textbook::

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

# Recent Publications

Defining the Public Health Threat of Food Fraud (2011) – First Scholarly Definition

**Overall, 18  
co-authors  
in 2017**

Food Fraud Prevention – A textbook to address the understanding, development and management of the fraud opportunity (In Press, 2019),

The Application of Public Policy Development Theory to the Emerging Food Fraud Risk: (2019) (UK/ Elliott)

Global perspectives on food fraud: results from a WHO survey of members of the INFOSAN (International Food Safety Authorities Network) (2019) (WHO/FAO)

International Survey of Food Fraud and related Terminology: Preliminary Results and Discussion (2019) (GMA)



# FOOD FRAUD PREVENTION BRIEF OVERVIEW

# Defining Food Fraud

- Action: **Intentional** deception for economic gain using food
  - Consistent with GFSI, EC/EU, UK, ISO, and others...
  - Including the sub-category of “Economically Motivated Adulteration” or EMA
  - Note: FDA currently defines EMA as a “substance” for “economic gain”
- Motivation: Economic Gain
  - “Food Defense” motivation is traditionally harm or terror
  - “Food Defense (FDA/FSMA-IA)” is narrowed to “wide-scale human health harm”
- Effect:
  - Economic **Threat**
  - Public Health **Vulnerability or Threat**

## Examples

- Horsemeat in ground beef
- Peanut Corporation selling known contaminated product
- Diluted or extra virgin olive oil
- Melamine in pet food and infant formula
- Over-icing with unsanitary water

- Unauthorized unsanitary repackaging (up-labeling or origin-laundering)
- Cargo Theft reintroduced into commerce/Stolen products
- Expired product date code tampering or “refreshing”

Reference: Spink & Moyer (2011). Defining the Public Health Threat of Food Fraud, Journal of Food Science

Link to MSU-FFI Glossary:

<http://foodfraud.msu.edu/2018/03/20/for-comment-glossary-of-food-fraud-related-terms-03-2018-please-participate/>

# Food Fraud Incidents - Modern

A broader range of Food Fraud incidents include:

- ~2004 – Sudan Red carcinogen colorant in paprika and other spices (adulterant-substance)
- 2007 – Melamine in infant formula and pet food
- 2012 – Horsemeat in beef (adulterant-substance)
- 2014 – Ground peanut shells used to extend cumin (adulterant-substance)
- Ongoing
  - Peanut Corporation of America selling product with known bacterial contamination (**tampering**)
  - Smuggled honey and origin laundering for tax avoidance (**diversion, country of origin**)
  - Stolen raw poultry re-introduced to the supply chain (**theft**)
  - Organic grain fraud schemes, \$140 million (**mislabelling**)
- Source: 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.



# The Food Risk Matrix

*Prevent by Understanding the Motivation*

Food Quality	Food Fraud	Motivation  Gain: Economic
Food Safety	Food Defense  Wide-scale health hazards	Harm: Public Health, Economic, or Terror
Unintentional	Intentional	
Action		

Source: Adapted from: Spink (2006), The Counterfeit Food and Beverage Threat, Association of Food and Drug Officials (AFDO), Annual Meeting 2006; Spink, J. & Moyer, DC (2011) Defining the Public Health Threat of Food Fraud, Journal of Food Science, November 2011

# Interdisciplinary Approach: The Science and Sciences of Food Fraud Prevention



Reference: Spink (2019), Food Fraud Prevention/ Textbook



# FOOD FRAUD PREVENTION TRENDS

# Food Fraud Trends

- Expand current programs
- Separate FF vulnerability assessment
- Specific countermeasures
- Holistic FF prevention strategy
- Implement the strategy
- ***Management system***
  - ***Assign a team based on your***
    - ***Unique fraud opportunity***
    - ***Unique risk tolerance***
    - ***Specific resource capabilities and capacity***

# ***A Reminder:*** Food Fraud Compliance Requirements: Dates

- GSFI (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***
  - ***(i) The hazard occurs naturally;***
  - ***(ii) The hazard may be unintentionally introduced; or***
  - ***(iii) The hazard may be intentionally introduced for purposes of economic gain.”***
- Food Drug & Cosmetics Act & Adulterated Foods – **1938**
  - Two sections: Adulterated Foods and Misbranded Foods
- Sarbanes-Oxley Act– **2002** and 2007
  - A risks to revenue are disclosed or confirmed to be managed
- **Customer: Supplier Quality & Safety Expectations**

# “Just a Check Box” – yes and no

- There is often a criticism that some audits are just a checkbox – did it, check. For this stage right now?
- YES! Absolutely.
- The formal and official process has started



**Q: YES OR NO?**

# Food Fraud Compliance Requirements: Scope

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

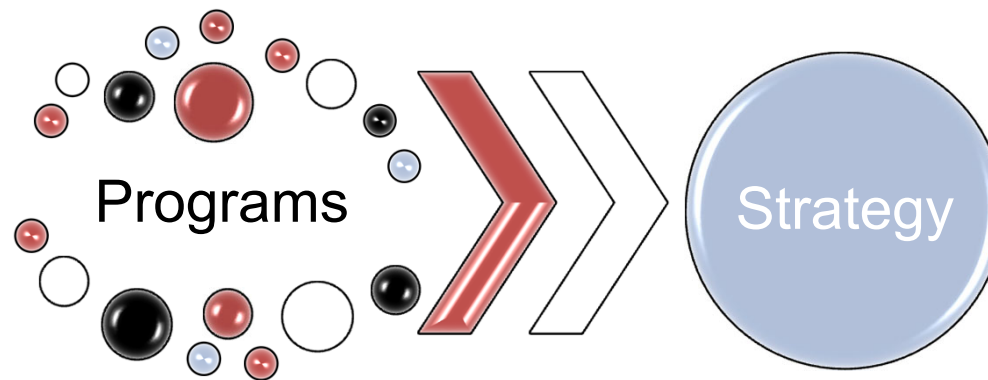
1. Conduct a Food Fraud Vulnerability Assessment (Y/N)
2. Written (Y/N)
3. Create a Food Fraud Prevention Strategy (Y/N)
4. Written (Y/N)
5. **Demonstrate Implementation (Y/N)**
6. **Executive Level Sign-off (Y/N)**
7. Minimally conduct an annual Food Fraud Incident Review (Y/N)
8. **Method to review 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-archive1/februarymarch-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/33890/new-food-magazine/past-issues/issue-1-2017/issue-1-2017-digital-version/>

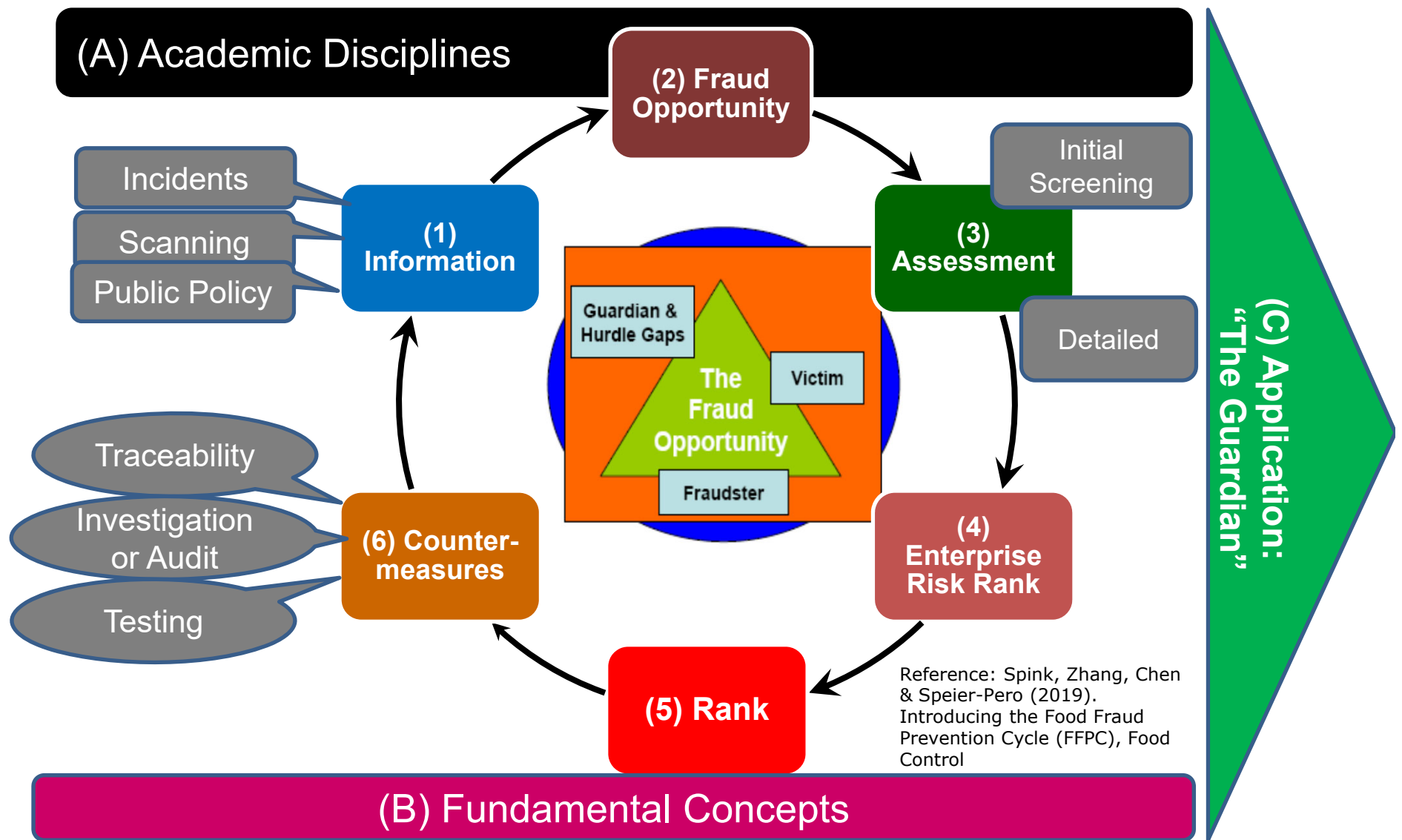


# Organizing Programs into a Strategy

- ...review current projects and write on a white-board... group and organize...

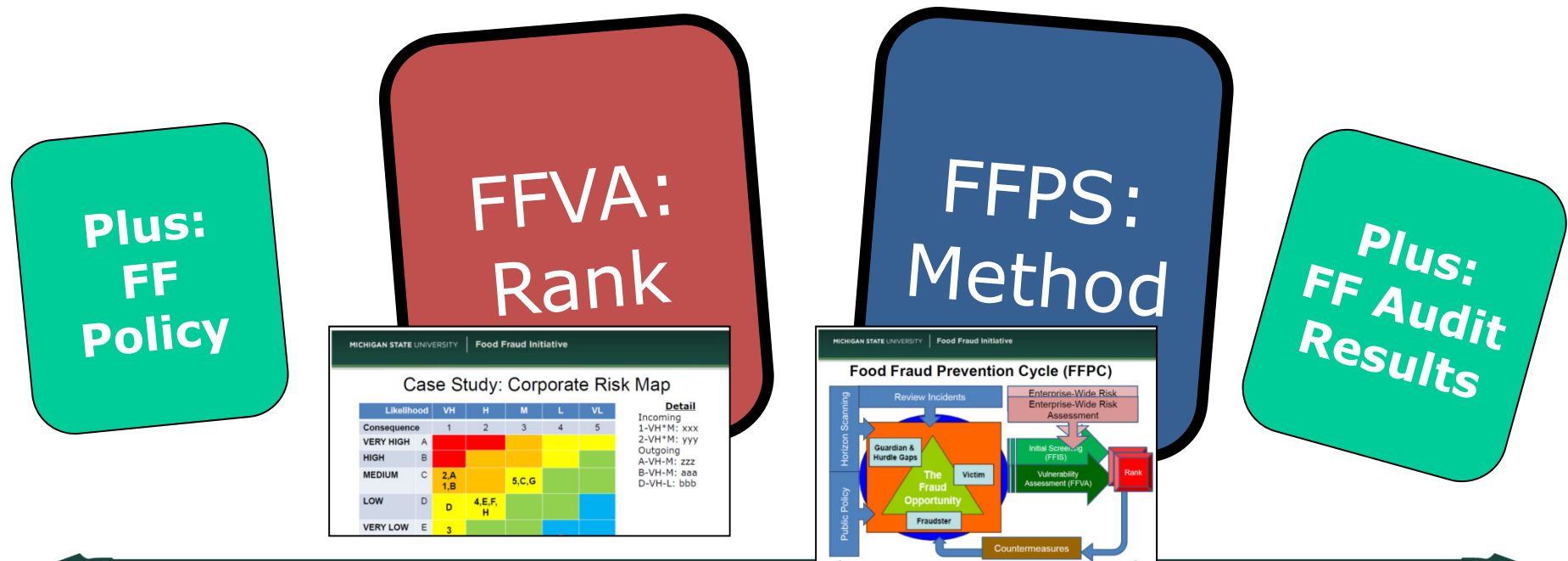






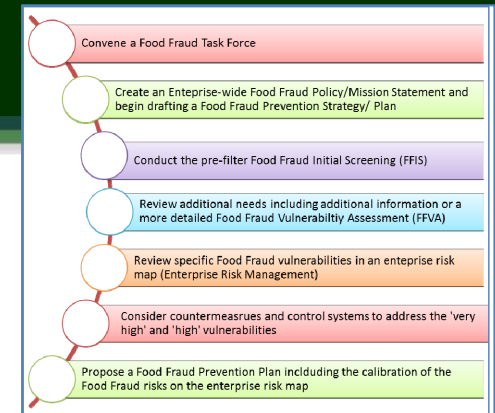
# Required Documents – Food Fraud

- Food Fraud Vulnerability Assessment
  - Clarify details: at least annual, etc.
- Food Fraud Prevention Strategy
  - Clarify details: covers all fraud and all products, etc.



## II. Food Fraud Prevention Strategy Implementation Series of Activities

1. Convene a Food Fraud Task Force
2. Create an Enterprise-wide Food Fraud Policy/Mission Statement and begin drafting a Food Fraud Prevention Strategy/ Plan
3. Conduct the pre-filter Food Fraud Initial Screening (FFIS)
4. Review additional needs including additional information or a more detailed Food Fraud Vulnerability Assessment (FFVA)
5. Review specific Food Fraud vulnerabilities in an enterprise risk map (Enterprise Risk Management)
6. Consider countermeasures and control systems to address the 'very high' and 'high' vulnerabilities
7. Propose a Food Fraud Prevention Strategy including the calibration of the Food Fraud risks on the enterprise risk map



Reference: Spink, Moyer & Whelan (2016).  
The role of the public private partnership in  
Food Fraud prevention—includes implementing  
the strategy. Current Opinion in Food Science

# DO IT = Proposal

- The proposal to submit to management
- No change is a decision to support the status quo
- Is more information needed?



# Discussion

John Spink, PhD

[SpinkJ@msu.edu](mailto:SpinkJ@msu.edu)

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

[www.FoodFraudPrevention.com](http://www.FoodFraudPrevention.com)



Link to Textbook: :

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

**MOOC programs: [www.FoodFraudMOOC.com](http://www.FoodFraudMOOC.com)**

