

Global Food Fraud Prevention Trends and Regulations

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WWW.FoodFraud.MSU.edu -- Twitter @FoodFraud and #FoodFraud



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Curriculum

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

- Food Fraud Overview, Two Session Course, May 19 & 26, 2015
 - Free, open, online, open to everyone
 - English and **Mandarin Language**
 - www.FoodFraud.msu.edu

Graduate Courses (Online, Three Credits)

- Anti-Counterfeit & Product Protection (Food Fraud)
- Quantifying Food Risk (including Food Fraud)
- Global Food Safety (including Food Fraud)
- Food Protection and Defense (Packaging Module)
- Packaging for Food Safety

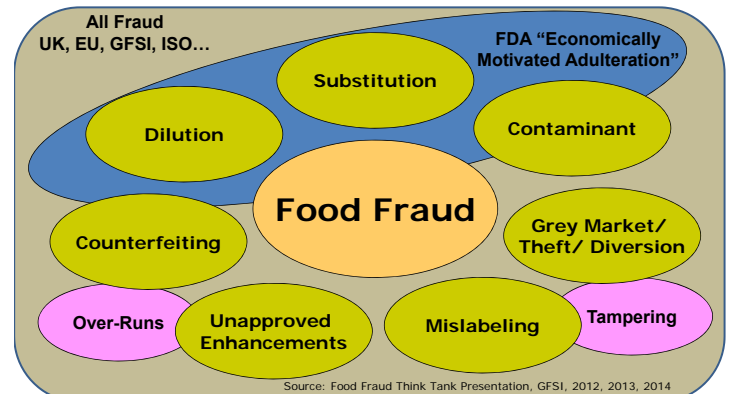
Certificate (Online, Four Courses Each)

- Certificate in Food Fraud Prevention (Food Safety)

Master of Science in Food Safety (Online)

- www.online.FoodSafety.msu.edu

What is Food Fraud?



Source: Food Fraud Think Tank Presentation, GFSI, 2012, 2013, 2014

Defining Food Fraud

- **Action: Deception Using Food for Economic Gain**
 - 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
- **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"

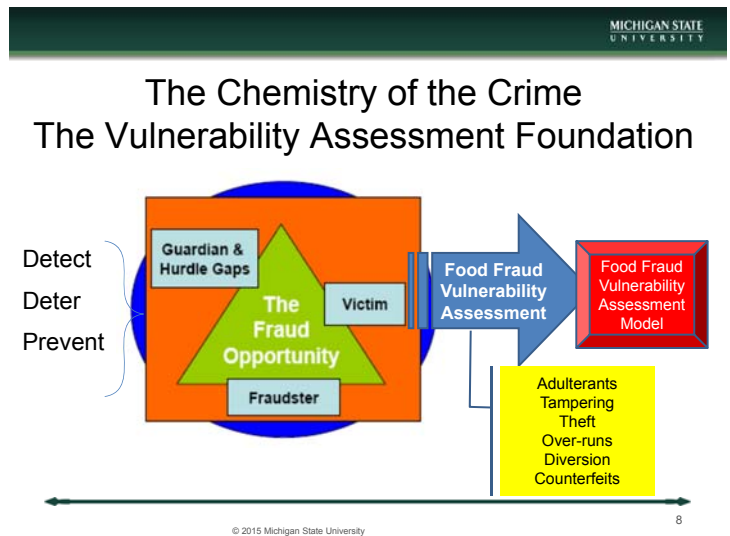
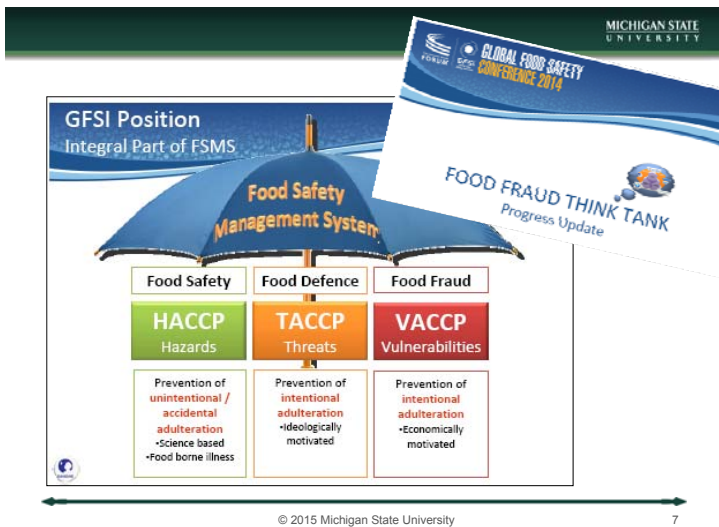
Reference: Spink & Moyer (2011). Defining the Public Health Threat of Food Fraud, Journal of Food Science

The Food Risk Matrix

Prevent by Understanding the Motivation

Food Security	Food Quality	Food Fraud ⁽¹⁾	Motivation
	Food Safety	Food Defense	Gain: Economic
	Unintentional	Intentional	Harm: Public Health, Economic, or Terror
	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



- ## Call to Action
- Academia
 - *Shift from intervention and response to prevention*
 - Define the value of technology and countermeasures in terms of the impact on prevention (re: lawsuits, enforcement, prosecution)
 - Lead with the behavioral sciences and criminology
 - Industry
 - *Food Fraud Prevention focus – holistic, consumer confidence*
 - Engage Governments in request for comments
 - Risk assessment/ vulnerability frame
 - Governments
 - *Focus broadly on product fraud not just adulterants*
 - Define Food Fraud in laws not just in regulations or guidance documents
 - Create and engage public-private partnership forum
 - Risk assessment/ risk summing for all population-wide risks
 - State and Local Agencies
 - Collaborate to define the risk- and science-based approach
 - Evaluate safety of food inspectors
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- ## Resources
- Food Fraud Reference Sheet
 - <http://foodfraud.msu.edu/food-fraud-reference-sheet/>
 - Crime Triangle Introduction and Application to Food
 - <http://onlinelibrary.wiley.com/doi/10.1111/j.1750-3841.2011.02417.x/abstract>
 - Types of Product Fraud/ Food Fraud
 - <http://www.crimesciencejournal.com/content/2/1/8>
 - Types of Counterfeiters/ Fraudsters
 - <http://www.crimesciencejournal.com/content/2/1/8>
 - Product Counterfeit Incident Clustering
 - <http://www.crimesciencejournal.com/content/3/1/3>
 - Case Study of Food Fraud Incidents – Challenges of Enforcement
 - <http://nopr.niscair.res.in/handle/123456789/11577>
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MSU Engagement 2014-2015

	Outcome	Benefit	Commitment
Graduate Course	Share your knowledge and set direction of research	Develop the internal talent to support initiatives in the AC space	14 Weeks, online, May to August, ~\$2200
Executive Education	Share your knowledge and set direction of research	Develop the internal talent to support initiatives in the AC space, meet other thought leaders ("invitation only" sessions for brand owners)	2 Days on-campus (\$1950) Feb 24-25 Feb 26-27 QFR Sept 16-17 Sept 18-19 QFR
Multi-Client Studies	Research the why's of AC/D, understand underlying drivers	Uncovering the drivers may lead to new strategies to combat Counterfeiting	Teleconference Meetings with option for on-campus e.g. Veterinary and Animal Product Fraud
MOOC	Engage global network of Food Fraud thinkers..	Two, 2-hour on-line webinar format with assessment. Students earn an MSU "credential".	November 10 & 17, 2014

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Discussion

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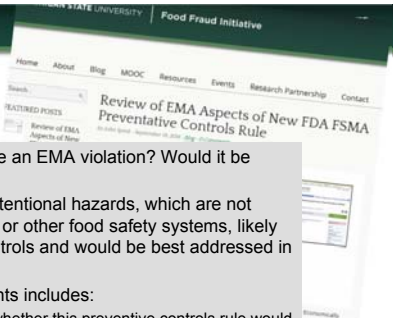
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USA Activities - October 2014

- GAO Fruit Juice Adulteration (1996) "Economic Adulteration"
- GAO Seafood Fraud (2/2009)
- CRS Seafood Fraud (2009, 2013)
- FDA Public Meeting on EMA (5/2009) "Economically Motivated Adulteration"
- **FSMA (1/2011) "Intentional Adulteration" (IA)**
- GMA Consumer Product Fraud (1/2011)
- GAO Report on EMA (10/2011) "Prevent all threats"
- FSMA IA Rule (12/2013 open, closed 2/2014)
- CRS Report on Food Fraud (1/2014) "Food Fraud"
- **FSMA PC Rule (Final, EMA open - 9/2014)**
- Presidential Task Force on Seafood Fraud (8/2014)

Update 9/20/2014

- 
- Would the horsemeat incident be an EMA violation? Would it be regulated by FDA? TBD.
 - FDA stated a conclusion that "intentional hazards, which are not addressed in traditional HACCP or other food safety systems, likely will require different kinds of controls and would be best addressed in a separate rulemaking."
 - The specific request for comments includes:
 - **Request for Comment 1:** "... whether this preventive controls rule would be the most appropriate rule to address FSMA's requirements to address hazards that may be intentionally introduced (for purposes of economic gain) and, if so,
 - **Request for Comment 2:** "what (if any) modifications to the proposed regulatory text would be appropriate. ... We are seeking comment on alternative ways to control such hazards."
 - Question: To address prevention, cover only adulterants or all fraud?

Global Activities - October 2014

- UK Elliott Review (Food Fraud/ Food Crime)
- EP/EU Resolution (Food Fraud)
- Interpol Operation Opson I, II, III (Food Crime/ IP)
- GFSI Guidance Document, plus..
 - Food Fraud Think Tank/ Food Fraud Mitigation Position Paper
 - Food Fraud Vulnerability Assessment Workshop
- PAS 96 Food Defence (Intentional), plus...
- ISO TC 247 Fraud Countermeasures and Controls, plus...
- GMA: Brand Protection, Consumer Product Fraud, plus...
- US Pharmacopeia/ Food Chemicals Codex (Adulteration), plus..
- US Food Safety Modernization Act (FSMA), plus...
 - Requesting comments on "Economically Motivated Adulteration"
- Corporate Processes and Systems
 - Quality/ Six Sigma
 - Enterprise Risk Management/ Chief Risk Officer
 - COSO (Committee of Sponsoring Organizations – business executive management and governance).