Food Fraud Prevention in the Food Safety Modernization Act

Emerging Issues and New Frontiers for FDA Regulation
Food Regulation Panel
Washington, DC – Monday, October 20, 2014 – 8:40 to 9:35am

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Member, Food Fraud Think Tank for GFSI
Member, GMA Economic Adulteration Work Group
Member, USP Food Ingredient Intentional Adulteration Expert Panel

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

### Massive Open Online Course (MOOC – free, open, online)
- Food Fraud Overview, Two Session Course, November 10 & 17, 2014
  - Free, open, online, open to everyone
  - English and Mandarin Language
  - [www.FoodFraud.msu.edu](http://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](http://www.online.FoodSafety.msu.edu)
Acknowledgements

- **MSU Veterinary Medicine**: Dean Christopher Brown, Chair Ray Geor, Dr. Wilson Rumbeiha and Dr. Dan Grooms, Cindy Wilson, Dean John Baker
- **MSU Global**: Associate Provost/Executive Director Christine Geith, Jerry Rhead, Gwyn Shelle, Lauren Zavala, Associate Provost/EVP Dr. Karen Klomparens, Rashad Muhammad
- **Queen's University Belfast (UK)**: Professor & Director Christopher Elliott, Dr. Moira Dean, Dr. Michael Hollis
- **MSU Online Master’s of Science in Food Safety**: Director Melinda Wilkins, Ex-Director Julie Funk, Kristi Denbrock, Heather Ricks, Peggy Trommater, Heidi Chen, Dr. Gary Ades, Chair Ray Goer
- **MSU Food Science**: Chair Fred Derksen, Les Bourquin, Bradley Marks, Felicia Wu, VP of Research Ian Gray, David Ortega, Gale Strasburg
- **MSU Program in Public Health**: Director Michael Rip and Douglas C Moyer
- **MSU NFSTC**: Dr. Scott Winterstein, Trent Wakenight, Dr. Kevin Walker, Sandy Enness, Jen Sysak, Dr. Rick Foster, to name a few critical contributors and supporters.
- **MSU Food Safety Policy Center**: Dr. Ewen Todd
- **MSU School of Packaging**: Dr. Bruce Harte, Dr. Robb Clarke, Dr. Laura Bix, Dr. Paul Singh, Dr. Diana Twede, Dr. Gary Burgess, Dr. Harold Hughes, Dr. Mark Uebersax, Dennis Young, and Director Joseph Hotchkiss
- **MSU Communication Arts/Consumer Behavior**: Dr. Maria Lapinski and Dr. Nora Rifon
- **MSU Criminal Justice**: Dr. Jeremy Wilson, Director Ed McGarrell, Dr. Justin Heinonen, Roy Fenoff, Zoltan Fejas, Barbara Sayre, and Sara Heeg
- **MSU Supply Chain Management**: Dr. Cheryl Speier, Dr. Ken Boyer, Dr. John MacDonald, Chair David Closs, Dr. Stan Griffith, Dr. Judy Whipple
- **MSU College Social Science**: Dean Marietta Baba and Assoc Dean Chris Maxwell
- **MSU College of Law**: Dr. Neil Fortin and Dr. Peter Yu
- **MSU Libraries**: Anita Ezzo, Nancy Lucas, Kara Gust
- **MSU International Programs**: Dr. Mary Anne Walker, Dr. John Whimms
- **State of Michigan’s Ag & Food Protection Strategy Steering Committee**: Dr. John Tilden, Brad Deacon, Gerald Wojtala, Byron Beerbower
What is Food Fraud?

- FDA “Economically Motivated Adulteration”
- Substitution
- Contaminant
- Grey Market/ Theft/ Diversion
- Counterfeiting
- Over-Runs
- Unapproved Enhancements
- Mislabeled
- Tampering

All Fraud
UK, EU, GFSI, ISO…

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

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Defining Food Fraud

• **Action:** Deception Using Food for Economic Gain
  – Including the sub-category of FDA “Economically Motivated Adulteration”

• **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

• **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

<table>
<thead>
<tr>
<th>Food Security</th>
<th>Motivation</th>
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<tbody>
<tr>
<td>Food Quality</td>
<td>Gain: Economic</td>
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<tr>
<td>Food Fraud(1)</td>
<td>Harm: Public Health,</td>
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<td></td>
<td>Economic, or Terror</td>
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<td>Food Safety</td>
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<td>Food Defense</td>
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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
The Chemistry of the Crime
The Vulnerability Assessment Foundation

Detect
Deter
Prevent

Guardian & Hurdle Gaps

Victim

Fraudster

The Fraud Opportunity

Food Fraud Vulnerability Assessment

Food Fraud Vulnerability Assessment Model

Adulterants
Tampering
Theft
Over-runs
Diversion
Counterfeits

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USA Activities - October 2014

- 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)
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?
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
  – Engage in request for comments/ Federal Register Notices
  – Risk assessment/ vulnerability frame
  – Food Fraud Prevention focus – holistic, consumer confidence

• 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
Resources

• Food Fraud Reference Sheet

• Crime Triangle Introduction and Application to Food

• 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
### MSU Engagement 2014-2015

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<td>Graduate Course</td>
<td>Share your knowledge and set direction of research</td>
<td>Develop the internal talent to support initiatives in the AC space</td>
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| 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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