Defining Food Fraud &
The Chemistry of the Crime

FDA Economically Motivated Adulteration
Public Meeting; Request for Comment
[Docket No. FDA-2009-N-0166]
May 1, 2009

John Spink, PhD
Associate Director
Anti-Counterfeiting and Product Protection Program (A-CAPPP)
School of Criminal Justice

Instructor, National Food Safety & Toxicology Center (NFSTC)
Michigan State University

spinkj@msu.edu
517.381.4491
The Food Continuum

<table>
<thead>
<tr>
<th>Food Quality</th>
<th>Food Fraud</th>
<th>Economic Threat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food Safety</td>
<td>Food Defense</td>
<td>Public Health Threat</td>
</tr>
<tr>
<td>Un-Intentional</td>
<td>Intentional</td>
<td>Source: Adapted from: Spink (2006), The Counterfeit Food and Beverage Threat, Association of Food and Drug Officials (AFDO), Annual Meeting 2006</td>
</tr>
</tbody>
</table>
Extremely Interdisciplinary
Types of Counterfeiting

- Adulterator
- Tamperer
- Over-runs
  - Licensee-Fraud
  - Re-Manufacturing
  - Unauthorized Refill
- Thief
- Diversion
  - Smuggling
  - Parallel Trade
  - Origin Laundering
- Simulations
- Counterfeiter
Anti-Counterfeit Strategy
Why Products are Counterfeited

- Profit
- Cheap to Copy
- Easy to Copy
- Unsatisfied Market Demands
- Difficulties in Detection and Proof
- Non-Deterrent Laws or Enforcement

(Sopido 1997)
Anti-Counterfeit Strategy
Reasons for Growth

• Availability and Growth of Technology
• Increased Globalization
• Low Legal Penalties
• Influence and Prevalence of Organized Crime
“The Business Case Analysis for Anti-Counterfeit Food Research”
Food Safety Policy Center, MSU, 2007

- counterfeit food is a public health threat;

- as is done in Food Safety and Food Defense, the most efficient and effective implementation is incorporating anti-counterfeit strategic steps into current “Standard Operating Procedures” (HACCP, GMP, Six Sigma, QA, etc.);

- current anti-counterfeit strategies and procedures from elsewhere in industry will be efficient and effective for the food industry; and

- the range of criminals and the range of actions will continue to be more aggressive, bolder, and more effective at infiltrating the legitimate food supply chain.
The Chemistry of the Crime
The Chemistry for a Crime

- The Crime Triangle
  - Likely Offender (Criminal)
  - Suitable Target (Victim)
  - Opportunity

(Source: Felson, 1998)
Define the Objectives

• Supply Chain Optimization
• Track, Trace, and Authentication
  ▪ Prove Genuine or Prove Fake
  ▪ Detect, Deter, or Both
  ▪ Human and/or Machine Readable
• Integrate Systems Across all Products
A Strategic Solution

• Monitoring all imported product is not practical.
• Monitoring all international food manufacturing is not practical.
• Focus on the root of the risk and actions...
  - *The chemistry of the crime:* Criminal, Victim, and Opportunity

• The Strategy
  - Intelligence Gathering
  - Create a Public Forum
  - Create Awareness & Harmonization

(Source: Spink, 2009, AAAS Conference)
Discussion

John Spink, PhD
SpinkJ@msu.edu
Acknowledgements

- **MSU NFSTC**: Dr. Scott Winterstein, Dr. Kevin Walker, Dr. Julie Funk, Dr. Ed Mather, Mr. Trent Wakenight, Ms. Kristi Gates, Ms. Sandy Enness, Ms. Jen Sysak, to name a few critical contributors and supporters.
- **MSU Food Safety Policy Center**: Dr. Ewen Todd and Dr. Craig Harris
- **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, and Dr. Mark Uebersax
- **MSU Communication Arts/ Consumer Behavior**: Dr. Maria Lapinski and Dr. Nora Rifon
- **MSU Supply Chain Management**: Dr. Cheryl Speier, Dr. Ken Boyer, and Dr. David Closs
- **MSU Criminal Justice**: Dr. Robyn Mace, Dr. Ed McGarrell, Dr. Jeremy Wilson
- **MSU College of Law**: Dr. Neil Fortin and Dr. Peter Yu
- **MSU Veterinary Medicine**: Dr. Wilson Rumbeiha and Dr. Dan Grooms
- **MSU Libraries**: Ms. Anita Ezzo, Ms. Nancy Lucas, and Ms. Kara Gust
- **State of Michigan’s Ag & Food Protection Strategy Steering Committee**: Dr. John Tilden, Mr. Brad Deacon, and Mr. Gary Wojtala