

The Commodities Most Likely to Cost You:

A Fraud Risk Primer for F&B Manufacturers

Today's Presenter:

Freeman Libby

The Acheson Group



FSMAFRIDAY

Monthly Industry News, Updates & Trends for Food, Beverage, & CPG Manufacturers



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- ✓ Monthly FSMA Related News
- ✓ Regulation Changes & Updates
- ✓ Industry Trends
- ✓ Q&A with TAG



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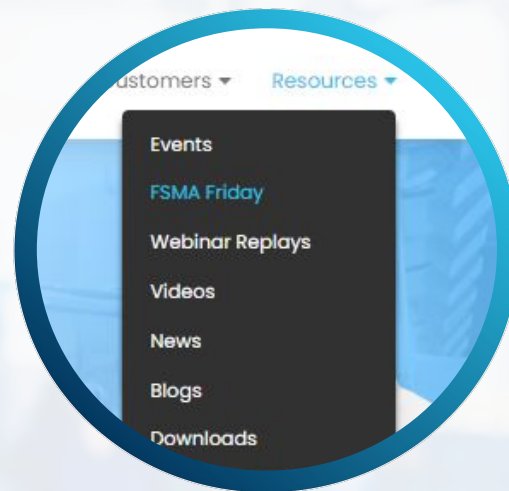


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- ✓ Only panelist microphones are on
- ✓ Ask questions! (Q&A at end)
- ✓ Recording link will be shared
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safetychain.com > Resources > FSMA Friday

Meet Your FSMA Friday Speaker

Freeman Libby

Director of Food Safety



Freeman Libby has over 45+ years of experience in a variety of areas within the food safety spectrum. He has extensive knowledge in food regulatory programs (Agriculture and Agri-Food Canada, Fisheries and Oceans Canada and the Canadian Food Inspection Agency): 3rd party certification auditing specializing in seafood, food commercial sterility, and meat and poultry processing; food safety government program analysis and food safety system program reviews. He also has international experience performing seafood inspection program reviews in Peru, Indonesia, Malaysia, and Thailand. Freeman retired from the CFIA in 2009 as National Director of the Feed Ban Task Force, where through a collaborative approach with the 10 provinces and the national industry associations, he was responsible for developing and implementing federal regulations and controls to eliminate "Mad Cow" (BSE) disease in Canada.



Agenda

01.

Recent Regulatory Updates

02.

The Commodities Most Likely to Cost You:
A Fraud Risk Primer for F&B Manufacturers

03.

Q&A

04.

SafetyChain Demo

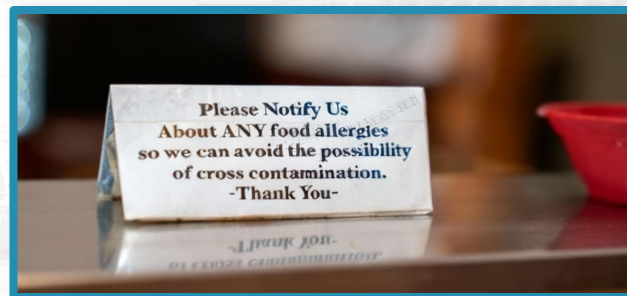
Recent Regulatory Updates Overview

FDA Regulatory Food Safety Update – July 2026

- 1) Cyclospora Outbreaks- 70+ illnesses linked to Iceberg lettuce
- 2) Multiple Recalls due to Undeclared Allergens; Listeria M. contamination; E. coli in produce and frozen foods and Imported foods with labelling and allergen declaration deficiencies
- 3) FDA Food Defense Rule Enforcement - Slow to get off the mark

What does this mean for Industry?

Organizations/processors should enhance and verify their allergen controls, supplier management, traceability systems, environmental monitoring and recall procedures to ensure they are effective.



The Commodities Most Likely to Cost You: A Fraud Risk Primer for F&B Manufacturers

Food Fraud

Today's Presentation Covers

1. Introduction and Definitions
2. Scope of Food Fraud and Types
3. Top Foods Affected by Food Fraud
4. Drivers and Impacts
5. GFSI Requirements
6. Regulatory Requirements
7. Consumer Awareness



What Is Food Fraud?

Simple definition:

Intentional deception using food for economic gain.

Comprehensive definition:

Collective term used to encompass the deliberate and intentional substitution, addition (or dilution), tampering, or misrepresentation of food, food ingredients, or food packaging; or false or misleading statements made about a product, for economic gain.

Food Fraud vs. Food Safety

Food Fraud:

Intentional deception, hidden actions, economic motivation.

Food Safety:

Unintentional contamination, accidental breakdown, health motivation.

The Overlap:

Fraud can accidentally cause severe safety hazards.



Food Fraud vs. Food Defense

Food Fraud:

Economic gain, asset protection, non-violent intent.

Food Defense:

Ideological gain, intentional harm, terror motivation.

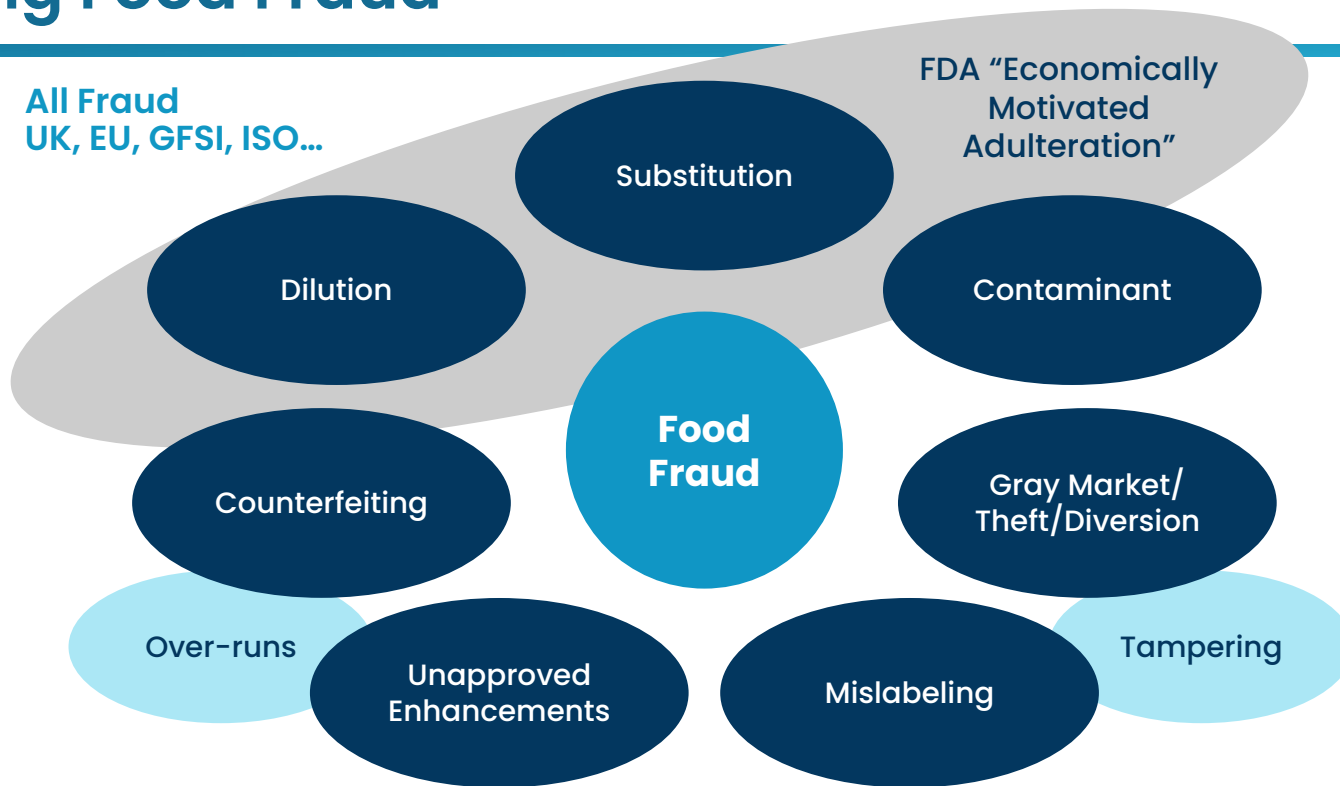
Key Difference:

Fraudsters want to remain undetected; terrorists want attention.

Defining Food Fraud

All Fraud
UK, EU, GFSI, ISO...

FDA "Economically
Motivated
Adulteration"



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

Scope Food Fraud

The Scope of the Problem

Global Cost:

Estimated \$10 to
\$50 billion
annually.

Market Impact:

Affects
approximately
10% of
commercially
sold food.

Consumer Trust:

Erodes public
confidence in
brands and
regulators.



Poll 1

Where does your food fraud program stand today?



- A** We have a documented program we actively manage

- B** We have the documentation, but it does not get used day to day

- C** We are just getting started

- D** We do not have one yet

Incident Types

Terminology	Definition	Example
Substitution	Replacing a high-value ingredient with a cheaper one.	Substituting an expensive species of seafood with a lower valued species (pollock sold as cod).
Dilution	Mixing a premium liquid with a lower-quality substance.	Adding Sunflower oil to Olive oil.
Counterfeiting	Copying brand packaging, logos, and product designs.	Using higher valued logos such as “organic”.
Mislabelling	False claims regarding origins, nutrition, or expiry dates.	Very similar to counterfeiting such as labelling non-organic produce as certified organic.
Unapproved Enhancements	Adding illegal chemicals to improve product appearance or weight.	Added to milk powder to artificially boost protein readings.
Diversion	Selling authentic products outside authorized distribution channels.	Legitimate product stolen and resold without quality control.
Forgery	Altering laboratory certificates, custom forms, or invoices.	Clean paperwork often masks physically adulterated goods.

Food Fraud

When did it become recognized as an issue of concern?



Horsegate

Horse meat sold as ground beef in Europe (2013).

This issue brought food fraud to the forefront.

- Regulatory agencies began taking it more seriously.
- Global Food Safety Initiative (GFSI) introduced more comprehensive requirements for processors – Supply Chain targeted.

Areas/Types of Risks



Health Risk:

Temporary or permanent health effects.



Economic Risk:

Company exposure to loss.



Regulatory Risk:

Recall, loss of registration.

Top Foods Affected

Olive Oil



Diluted with other less expensive oils, including hazelnut, soybean, corn, sunflower, palm, sesame, grape seed and walnut.

Milk



Found to contain vegetable oil, whey, caustic soda, cane sugar, detergent melamine and formaldehyde.

Honey



Diluted with high-fructose corn syrup, sucrose syrup, invert beet sugar, water and essential oils.

Top Foods Affected

Saffron



World's most expensive spice, but it often contains adulterants such as glycerin, sandalwood dust, tartrazine (yellow dye), barium sulfate, borax, marigold flowers.

Orange Juice



Lemon juice, sugar water, paprika extract, marigold flower extract, and a synthetic sugar/acid mixture.

Coffee



Roasted corn, ground parchment, barley, coffee twigs, potato flower, malt, chicory and caramel.

Top Foods Affected

Apple Juice



Corn syrup, raisin sweetener, malic acid, beet sugar and other juices, such as grape, pineapple, pear and fig.

Tea



Sawdust, starch, China clay, used tea leaves and color additives.

Fish



Species substitution.

Top Foods Affected

Organic and Halal/ Kosher Foods



High profit margins attract fraudulent certification claims. Exploits religious and lifestyle choices of vulnerable consumers.

Black Pepper



with juniper berries, papaya seeds, starch, buckwheat flour and millet seeds.

Why is Food Fraud Increasing?



Source: The Global Food Safety Initiative.

Economic Drivers and Impacts

High Reward:

Profit margins can reach hundreds of percent.

Low Risk:

Detection rates are historically low worldwide.

Market

Pressure:

Intense price competition forces suppliers to cut corners.

Drivers and Impacts: Supply Chain Complexity



Globalization:

Ingredients cross multiple borders before final packaging.



Brokers:

Multiple intermediaries obscure the original source of goods.



Visibility:

Raw material visibility drops with every processing step.

Drivers and Impacts: Public Health Consequences



Allergens:

Hidden ingredients (like peanut skins in cumin) cause anaphylaxis.



Toxic

Chemicals:

Industrial dyes and plasticizers cause organ failure.



Malnutrition:

Diluted infant formulas deprive babies of vital nutrients.

Drivers and Impacts: Economic & Brand Damage



Recalls:

Massive financial costs to pull products from shelves.



Bankruptcy:

Companies can collapse from legal liabilities and lost trust.



Industry Impact:

A single scandal depresses sales for entire food sectors.

Drivers and Impacts: Legal and Regulatory



Fines:

Regulatory bodies issue multi-million dollar corporate penalties.



Jail Time:

Executives face criminal prosecution for knowingly selling fraud goods.



Lawsuits:

Class-action litigation from affected consumers harms corporate longevity.

Food Fraud – Regulatory

Food fraud is not at the top of the regulators' agenda. Regulations are strong on paper, but **enforcement is often reactive and resource-limited.**

Fraud tends to be uncovered after **economic, or safety damage** occurs.

Most food fraud investigations are the result of **consumer complaints and industry trade complaints.**

Food Fraud – Regulatory

Food fraud is normally concentrated in the areas of food safety, labeling, and consumer protection.

In **Canada**, the Canadian Food Inspection Agency enforces:

- Safe Food for Canadians Regulations (SFCR)
- Food and Drugs Act (labelling, adulteration)

In the **U.S.**, the Food and Drug Administration addresses fraud under:

- Food Safety Modernization Act (FSMA) — includes Intentional Adulteration rule
- For meat products, the USDA are responsible for ensuring these products are safe, labelled correctly and ingredients are controlled via approved suppliers.

Globally:

- Codex Alimentarius Commission sets standards
- European Food Safety Authority and EU Food Fraud Network coordinate enforcement

Regulatory – CFIA

Under the [Safe Food for Canadians Regulations \(SFCR\)](#), food fraud is explicitly regulated as a form of **food misrepresentation**.

Canadian laws strictly prohibit selling, packaging, importing, or advertising food in a **false, misleading, or deceptive manner**.
[\[1\]](#) [\[2\]](#) [\[3\]](#)

Although not specifically identified, food fraud can be captured in the preventive control program (PCP) where hazards such as allergens must be identified; supplier verification is required; incoming ingredients must be controlled.

Regulatory – FDA

Economically Motivated Adulteration

EMA is the process that FDA has in place as one way to combat Food Fraud.

The FDA's adopted working definition for EMA

Fraudulent, intentional substitution or addition of a substance in a product for the purpose of increasing the apparent value of the product or reducing the cost of its production, i.e., for economic gain.



Regulatory – FDA

Economically Motivated Adulteration

The U.S. FDA's Food Safety Modernization Act (FSMA) expanded food protection beyond traditional food safety hazards by specifically addressing intentional acts that could harm consumers, including economically motivated adulteration (EMA), which is commonly associated with food fraud.



Regulatory – FDA

Economically Motivated Adulteration

Relevant regulations include:

- 21 CFR Part 117 for human food
- 21 CFR Part 507 for animal food

Facilities must evaluate whether economically motivated adulteration could introduce a food safety hazard.

Regulatory – FDA

Economically Motivated Adulteration

21 CFR Part 117 for Human Food

- Each facility must conduct a written hazard analysis.
- Must explicitly evaluate known or reasonably foreseeable hazards introduced for economic gain.
- Must implement a Supply-Chain Program under [21 CFR 117 Subpart G](#). [1, 2]
- When an EMA hazard is identified as a significant risk requiring control, a written [Preventive Control Plan](#) must be executed. [1]

Regulatory – FDA

Economically Motivated Adulteration

Key note:

- A facility only needs to control fraud if it introduces a hazard (e.g., adding toxic industrial dyes to brighten spices, or substituting whitefish with a toxic pufferfish species).
- If a fraudulent act does **not** pose a health risk (e.g., mislabeling standard honey as "organic"), it bypasses 117 and is regulated under general FDA misbranding laws ([21 U.S.C. 343](#)).

Poll 2

Has your team evaluated economically motivated adulteration in your hazard analysis?



- A** Yes, and we have preventive controls in place for it

- B** Yes, but we are not confident it would hold up on audit day

- C** We know we need to, and we have not done it yet

- D** We are not sure whether this applies to us

Food Fraud – 3rd Party Certification

Global Food Safety Initiative (GFSI)

- Significant number of food processing facilities are now certified under the GFSI Umbrella

GFSI Scope Definition

- Mandates protection against all food fraud types.
- Targets both economic deception and safety hazards

Food Fraud – 3rd Party Certification

Two Pillars of Defense

- Requires a documented **Food Fraud Vulnerability Assessment** (FFVA).
- Requires a documented **Food Fraud Mitigation Plan** (FFMP).

Processes Required

- That evaluates substitution, dilution, counterfeiting, and mislabeling.
- That covers all incoming raw materials and packaging.

Poll 3

How do you manage
your food fraud
vulnerability
assessment and
mitigation plan today?



- A** In a dedicated software system
- B** In spreadsheets and shared files
- C** Across email, binders, and the people who know where things are
- D** We have not built one yet

Food Fraud – Challenges

There are several challenges such as:

Limited regulatory involvement due to other priorities.

Use of foreign suppliers that are not controlled by their government.

Difficulty in distinguishing natural versus synthetic (vanilla as an example) trade complaints.

Difficulty in having cost efficient testing available.



Food Fraud – Impacts

Impacts to Consumers

There are three key areas that impact consumers:

1 Health risks are a concern due to allergies (i.e. gluten free versus regular wheat used; peanut oil used when not declared).

2 Loss of confidence by the consumer if a company is found to not follow protocols and fraudulent practices observed.

3 Although not an impact to consumers, but an impact to companies is the threat of **legal action**.

Food Fraud – Impacts to Industry

The impacts to the industry for fraud are basically the same as food safety recalls. When a company is required to recall a product there are significant ramifications and a company found to perform fraudulent activities they ramifications are very similar:

- Erosion of brand integrity
- Increased compliance costs
- Supply chain instability
- Competitive disadvantage for honest suppliers (i.e. when a firm is caught misrepresenting product, consumers sometimes do not differentiate brands, but blame the entire industry)
- Greater regulatory scrutiny and audits
- Legal processes by the consumer
- Causing harm to the consumer (i.e. sickness)

Food Fraud

Some Solutions and Strategies for Risk Mitigation?

ANSWER:

- Strong controls throughout the food production and distribution chain to ensure fraudulent practices are kept to a minimum
- Processors should use the various databases found throughout the food safety world to ensure their suppliers are not performing fraudulent activities.
 - USFDA database for food fraud
 - Michigan State University Food Fraud database;
 - Horizon Global database, etc.
- Verification activities such as random testing of products and creating own database on their suppliers
- GFSI Certification
- FDA FSMA Requirements – Economically Motivated Adulteration Controls (EMAs)

Poll 4

What slows your team down most when verifying suppliers and incoming materials?



- A** Chasing and tracking COAs and certificates

- B** Keeping supplier approvals and documents current

- C** Pulling the proof together quickly on audit day

- D** We have this handled well

Signs of Food Fraud

Too Good to be True – High Risk Foods are More at Risk

Food Fraud

Consumer Awareness

1

Buy from known
sources/
retailers

2

Read Labels
Carefully
(i.e. scallop
medallions
does not mean
whole scallops)

3

Look for trusted
Certifications

4

High end
products are
more
susceptible

5

Be on the alert –
news outlets;
social media
notices,
consumer
reports, etc.

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Questions?



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