

World Spice Congress 2012

Pune, India



McCormick Global Ingredients Limited

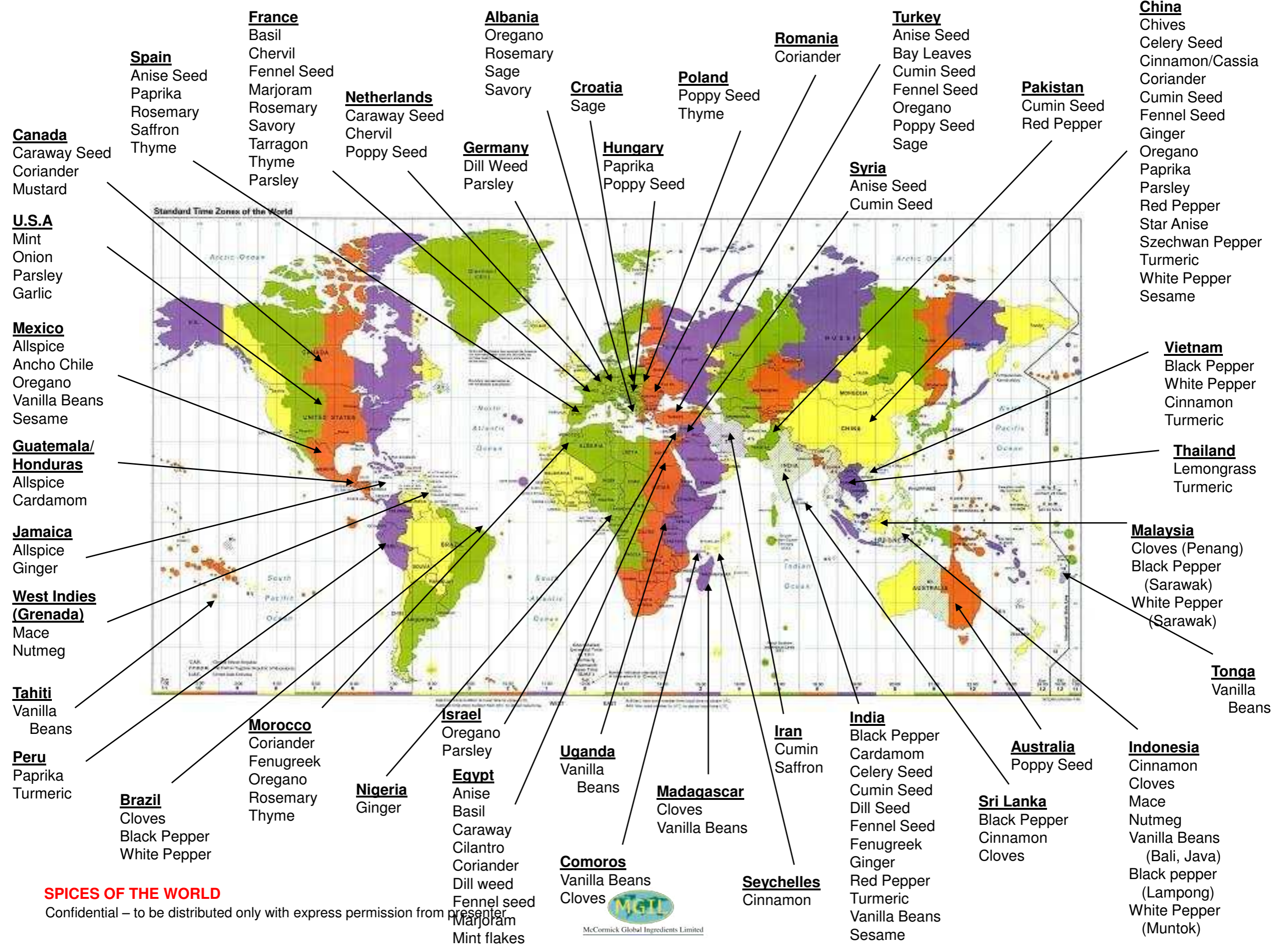
Greg Sommerville
Director, Procurement Operations

Topic

- Why food safety is critical to the US supply chain in spices
- Expectations of US consumer companies from suppliers and producing countries
 - Procurement
 - Processing
 - Quality
 - Supplier rating

Global Food Supply

- 13% of the average US family's food is now imported from over 180 countries around the globe.
- 60% of fruits and vegetables and 80% of seafood are now imported.
- More than 130,000 foreign facilities registered
- Food imports will continue to expand to meet consumer need for more variety, year around availability and lower cost.



Canada
Caraway Seed
Coriander
Mustard

U.S.A
Mint
Onion
Parsley
Garlic

Mexico
Allspice
Ancho Chile
Oregano
Vanilla Beans
Sesame

**Guatemala/
Honduras**
Allspice
Cardamom

Jamaica
Allspice
Ginger

**West Indies
(Grenada)**
Mace
Nutmeg

Tahiti
Vanilla
Beans

Peru
Paprika
Turmeric

Brazil
Cloves
Black Pepper
White Pepper

Spain
Anise Seed
Paprika
Rosemary
Saffron
Thyme

France
Basil
Chervil
Fennel Seed
Marjoram
Rosemary
Savory
Tarragon
Thyme
Parsley

Netherlands
Caraway Seed
Chervil
Poppy Seed

Germany
Dill Weed
Parsley

Albania
Oregano
Rosemary
Sage
Savory

Croatia
Sage

Hungary
Paprika
Poppy Seed

Poland
Poppy Seed
Thyme

Romania
Coriander

Syria
Anise Seed
Cumin Seed

Turkey
Anise Seed
Bay Leaves
Cumin Seed
Fennel Seed
Oregano
Poppy Seed
Sage

Pakistan
Cumin Seed
Red Pepper

Vietnam
Black Pepper
White Pepper
Cinnamon
Turmeric

Thailand
Lemongrass
Turmeric

Malaysia
Cloves (Penang)
Black Pepper (Sarawak)
White Pepper (Sarawak)

Tonga
Vanilla
Beans

Indonesia
Cinnamon
Cloves
Mace
Nutmeg
Vanilla Beans (Bali, Java)
Black pepper (Lamongan)
White Pepper (Muntok)

Sri Lanka
Black Pepper
Cinnamon
Cloves

Australia
Poppy Seed

India
Black Pepper
Cardamom
Celery Seed
Cumin Seed
Dill Seed
Fennel Seed
Fenugreek
Ginger
Red Pepper
Turmeric
Vanilla Beans
Sesame

Iran
Cumin
Saffron

Seychelles
Cinnamon

Madagascar
Cloves
Vanilla Beans

Uganda
Vanilla
Beans

Comoros
Vanilla Beans
Cloves

Israel
Oregano
Parsley

Egypt
Anise
Basil
Caraway
Cilantro
Coriander
Dill weed
Fennel seed
Marjoram
Mint flakes

Nigeria
Ginger

Morocco
Coriander
Fenugreek
Oregano
Rosemary
Thyme

SPICES OF THE WORLD

Confidential – to be distributed only with express permission from presenter



Customer Safety

Critical to the success of any business

Major Food Safety and Regulatory Hazards Associated with Spices

- Micro
- Allergens
- Adulterations
- Foreign seeds
- Chemical contaminations

Micro Background

- 48 million Americans get sick each year from food-borne diseases
- 3,000 Americans die every year from a food-borne illness.
- *Salmonella* is the most common bacterial cause of food-borne disease in the United States
- It causes 1.4 million illnesses and 400 deaths annually
- A recent outbreak of a virulent strain of *E.coli* in Europe, which killed dozens of people and made thousands sick, has raised new concerns about food safety here.

Damage to Brand or Product

- 2011
 - Cantaloupes – 29+ people dead of listeria, worst food outbreak since CDC started tracking
 - Cantaloupes – salmonella panama
 - Ground Beef – e.coli O157:H7
 - Spinach Dip – listeria
 - Strawberries – e.coli
 - Turkey – salmonella, 1 dead, 76 sickened
 - Peanut butter

Salmonella in Spices

- 2011 Organic celery seed
- 2011 Organic Black pepper
- 2010 Black & Red pepper – sickened more than 200+ people in 42 states
- 2009 White pepper

FDA Recall Classification

- Recalls are actions taken by a firm to remove a product from the market. Recalls may be conducted on a firm's own initiative, by FDA request, or by FDA order under statutory authority.
- Class I recall:** a situation in which there is a reasonable probability that the use of or exposure to a violative product will cause serious adverse health consequences or death.
- Class II recall:** a situation in which use of or exposure to a violative product may cause temporary or medically reversible adverse health consequences or where the probability of serious adverse health consequences is remote.
- Class III recall:** a situation in which use of or exposure to a violative product is not likely to cause adverse health consequences.
- Market withdrawal:** occurs when a product has a minor violation that would not be subject to FDA legal action. The firm removes the product from the market or corrects the violation. For example, a product removed from the market due to tampering, without evidence of manufacturing or distribution problems, would be a market withdrawal.
- FSMA now has a clause where there can require a mandatory recall.

Information Available on the Web

Information on the Recalled Whole Cantaloupes

Updated October 21, 2011

- FDA Publishes Report on Factors Potentially Contributing to the Contamination of Fresh, Whole Cantaloupe Implicated in the Multi-State *Listeria monocytogenes* Foodborne Illness Outbreak
- FDA Sample Records and Results on Jensen Farms
- Jensen Farms' Recall
- Consumer Safety Information
- Additional Information and Relevant Links

FDA Publishes Report on Factors Potentially Contributing to the Contamination of Fresh, Whole Cantaloupe Implicated in the Multi-State *Listeria monocytogenes* Foodborne Illness Outbreak

On October 19, 2011, FDA released a document which provides an overview of factors that potentially contributed to the contamination of fresh, whole cantaloupe with the pathogen *Listeria monocytogenes* which was implicated in a multi-state outbreak of listeriosis. In early September 2011, the Food and Drug Administration (FDA), in conjunction with the Centers for Disease Control and Prevention (CDC) and state health departments, began to investigate a multi-state outbreak of listeriosis. Early in the investigation, cantaloupes from Jensen Farms in the southeast region of Colorado were implicated in the outbreak.

On September 10, 2011, FDA, along with Colorado state officials, conducted an inspection at Jensen Farms and collected multiple samples, including whole cantaloupes and environmental (non-product) samples from within the facility, for laboratory analysis to identify the presence of *Listeria monocytogenes*. Of the 39 environmental swabs collected from within the facility, 13 were confirmed positive for *Listeria monocytogenes* with pulsed-field gel electrophoresis (PFGE) pattern combinations that were indistinguishable from three of the four outbreak strains collected from affected patients. Of the 13 positive environmental swabs, 12 were collected at the processing line and 1 was collected from the packing area. Cantaloupe collected from the firm's cold storage during the inspection was also confirmed positive for *Listeria monocytogenes* with PFGE pattern combinations that were indistinguishable from two of the four outbreak strains.

FDA Environmental Swabs Positive Results

Processing Line	9 positive samples from the grading belt Swabs 21, 22, 23, 24, 26, 27, 29, 30 & 33
	2 positive samples from the conveyor Swabs 20 & 28
	1 positive sample from the felt rollers Swab 13
Packing Area	1 positive sample from the conveyor belt Swab 34

FDA Product Sample Results

1 Cantaloupe Sample collected from cold storage
5 subs tested positive
(10 whole cantaloupes or "Subs")

Name of company

Results

More web info

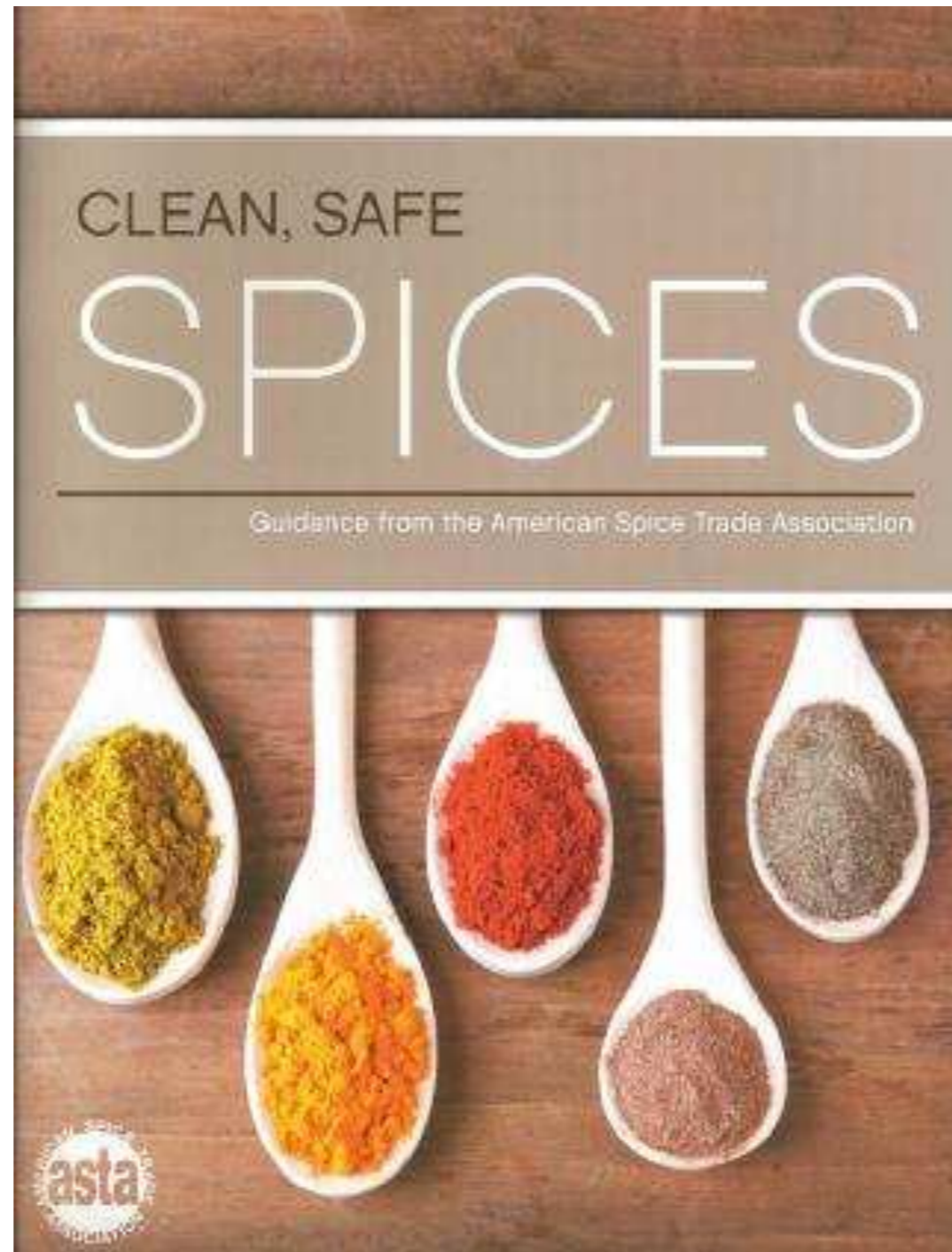
- <http://www.fda.gov/Safety/Recalls/default.htm>
- Can search by company name, product or brand
- Maybe even shows a picture of the product



Critical to Supply Chain

- No responsible company or individual wants to hurt customers or damage their brand
- A recall:
 - can be far reaching and affect not only the product but an entire category
 - forces regulatory authorities to become more involved, auto detention, further sampling, more inspections
 - raises public concern

ASTA Manual



ASTA Clean Safe Spice Guidance

1. Minimize risk for introduction of filth throughout the supply chain
2. Prevent environmental contamination, cross contamination and post-processing contamination during processing and storage
3. Use validated microbial reduction techniques
4. Perform post-treatment testing to verify a safe product
5. Test to verify a clean and wholesome manufacturing environment

Guidance Dissemination

- Available for download from ASTA Web site
www.astaspice.org
- Hard copies can be purchased (\$10)
- Workshop on guidance in April
- Recorded and available at no charge on ASTA Web site

Procurement

The most effective and efficient method to assure the absence of adulterants and contaminants is through control of the supply chain back to source.

Processing & Quality

- Quality Professionals
- HACCP plans
- Risk assessments
- Environmental testing
- Validated kill steps
- Post treatment handling
- Sampling

Probability of Missing Contamination

Number of Samples Tested	% Contamination in Lot			
	10%	2%	1%	0.5%
3	73%	94%	97%	99%
10	35%	82%	90%	95%
60	<0.5%	30%	55%	74%
120	<0.5%	8.5%	30%	55%
180	<0.5%	2.6%	16%	41%
240	<0.5%	0.8%	9%	30%

Food Safety Modernization Act

- FSMA
- <http://www.fda.gov/Food/FoodSafety/FSMA/ucm247546.htm>
- Higher hurdle for documentation and sharing of documents. The legislation gives a specific goal that requires importers to perform verification of supplier's activities.

Reportable Food Registry

- Requires all operations that manufacture, process, pack or hold food to report to FDA within 24 hours of identifying an article of food when a reasonable probability it will cause serious adverse health consequences.
- **Public and available on the web.**

Risk Management

- ***PREVENTION*** – *Build quality and food safety in from the start*
- ***INTERVENTION*** – *Verify preventions with focused inspection and risk-based surveillance and testing*
- ***RESPONSE*** – *Immediate response if compromised product reaches the market*

Conclusions

- Primary goal to protect the health of consumers. In the event of a conflict, precedence should be given to protecting the health of consumers
- Secondary goal to protect the brand
- “You” are all the stakeholders in food safety: consumers, industry, food safety professionals, local and state regulators, and international trading partners

The End

Thank You



McCormick Global Ingredients Limited