

Why all the Attention to Food Safety?

IFST

London

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By

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Presentation Agenda

- Historical Trends in food safety issues
- Detecting food safety issues
- Consumer Reaction to food safety problems
- Economics of food safety failures
- Food Safety Modernization Act U.S.
- Responsibility

Importance of History

“Those Who Do
Not Learn From
History Are
Doomed to
Repeat It!”



Source: Winston Churchill

The USA Food Industry

- Food Sector is 20% of Nation's Economy
- Employ about 16% of the workforce
- > 2,000,000 farms in US
- 900,000 restaurants
- 100,000 retail food stores
- 81,575 FDA Registered Domestic mft & whse
- 115,575 FDA Register Foreign food mft
- 6,805 USDA meat processing facilities

Food Borne Illness

- CDC estimates contaminated food in U.S. is responsible for:
 - 47.8 million illnesses
 - 127,839 hospitalization
 - 3,037 deaths
 - Costs U.S. \$14 billion in medical care, lost of productivity, chronic health problems

Source: CDC 2011

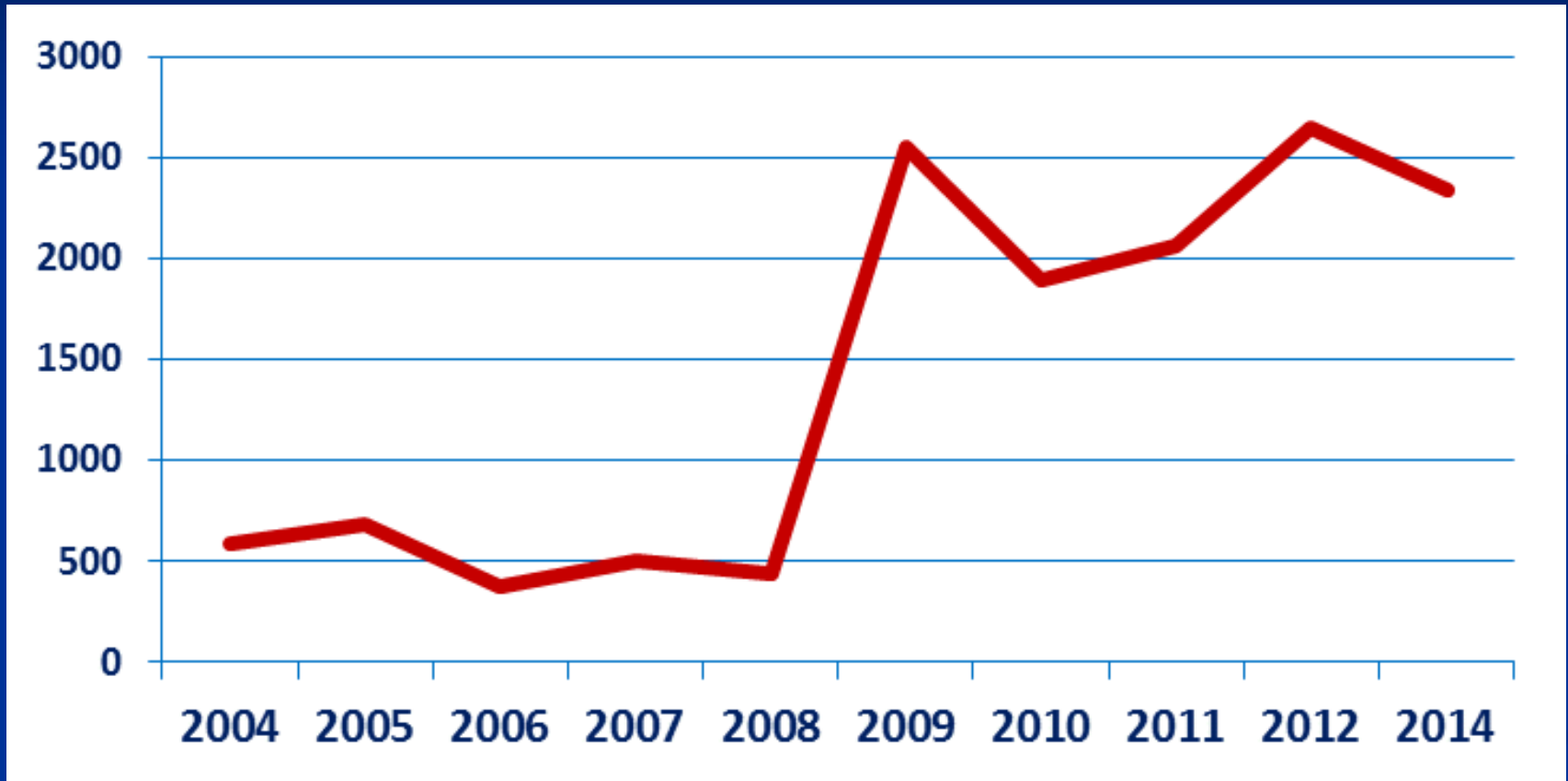
Food Safety Under the Magnifying Glass



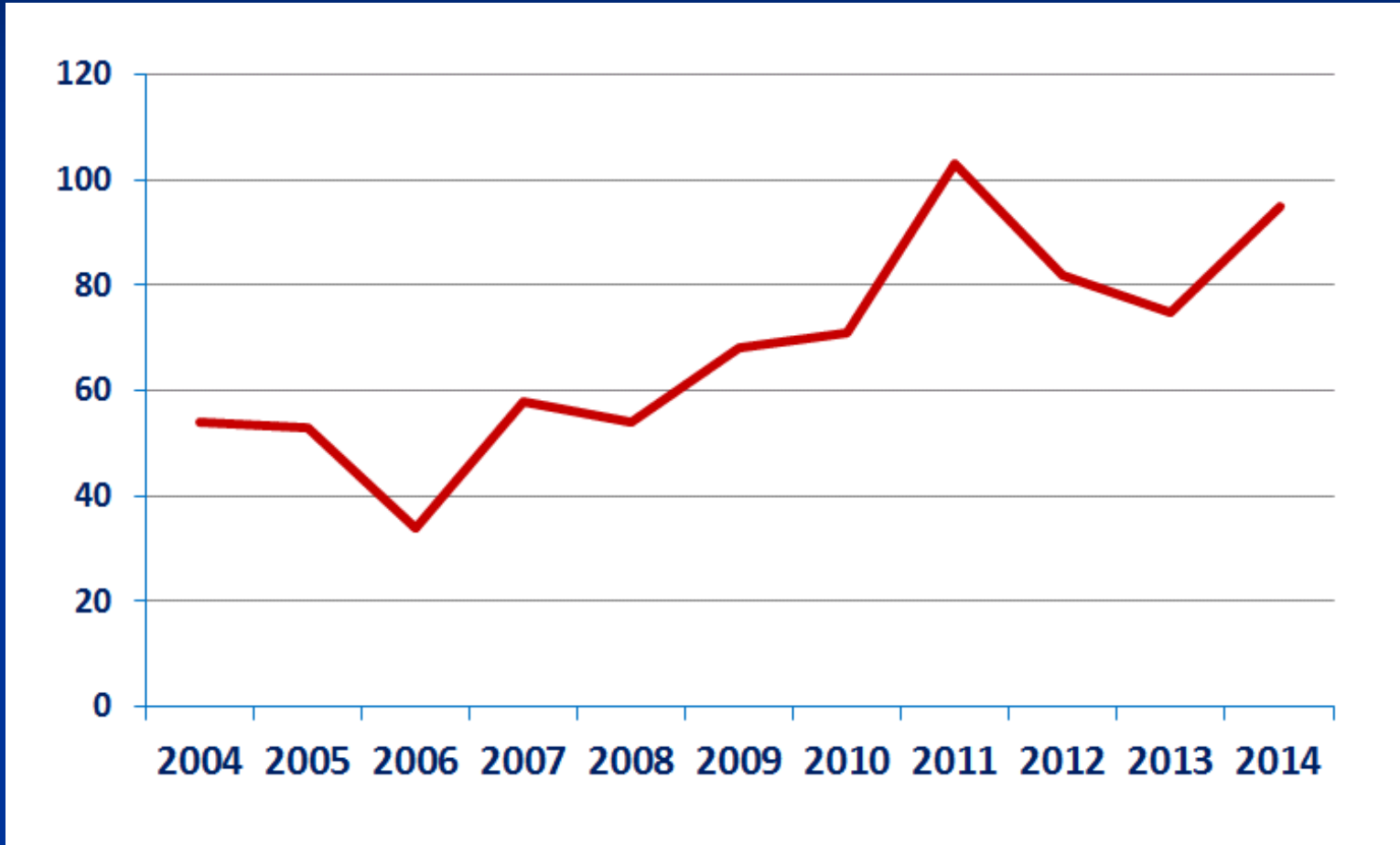
Food Safety Hazards

- Microbiological
- Chemical
- Physical

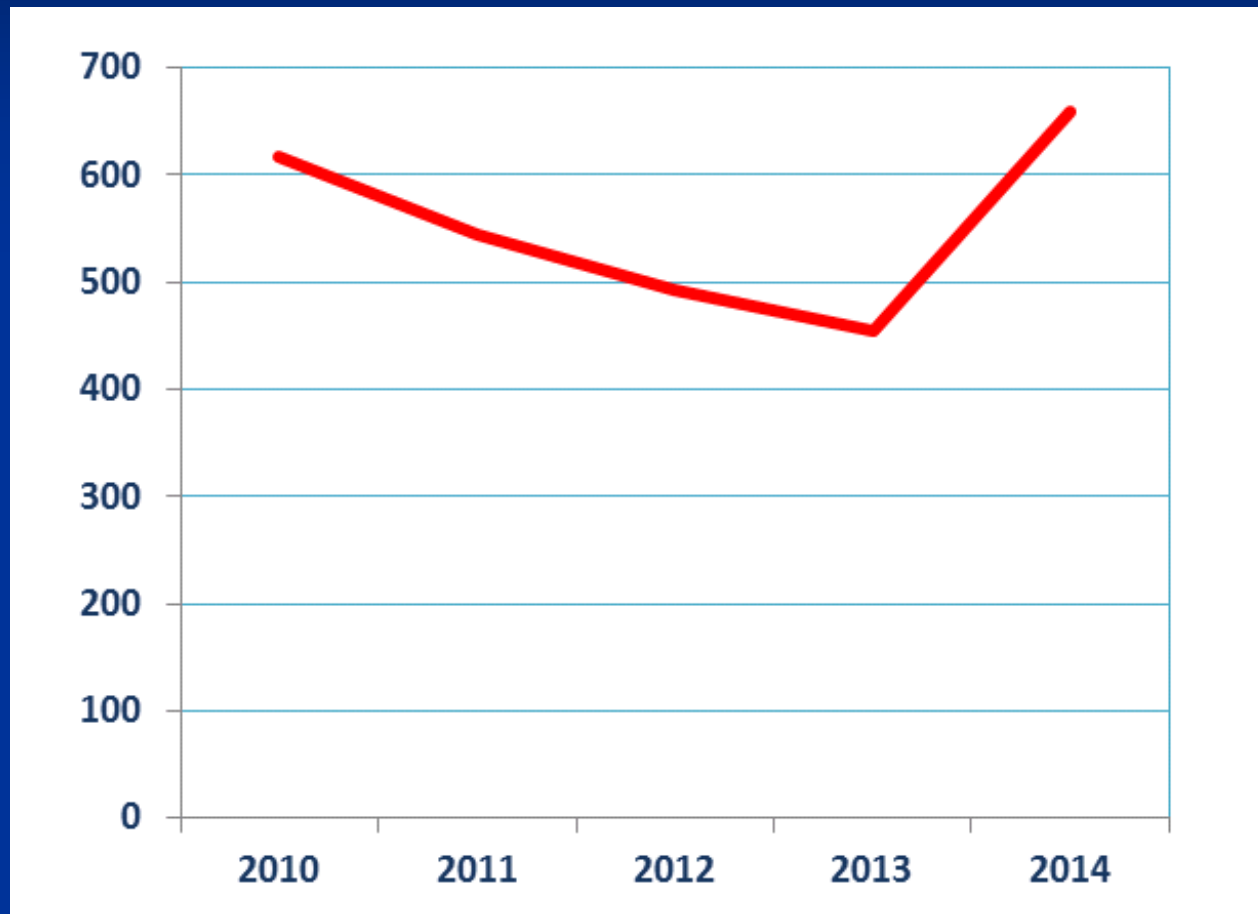
FDA Food Recall Trends 2004 - 2014



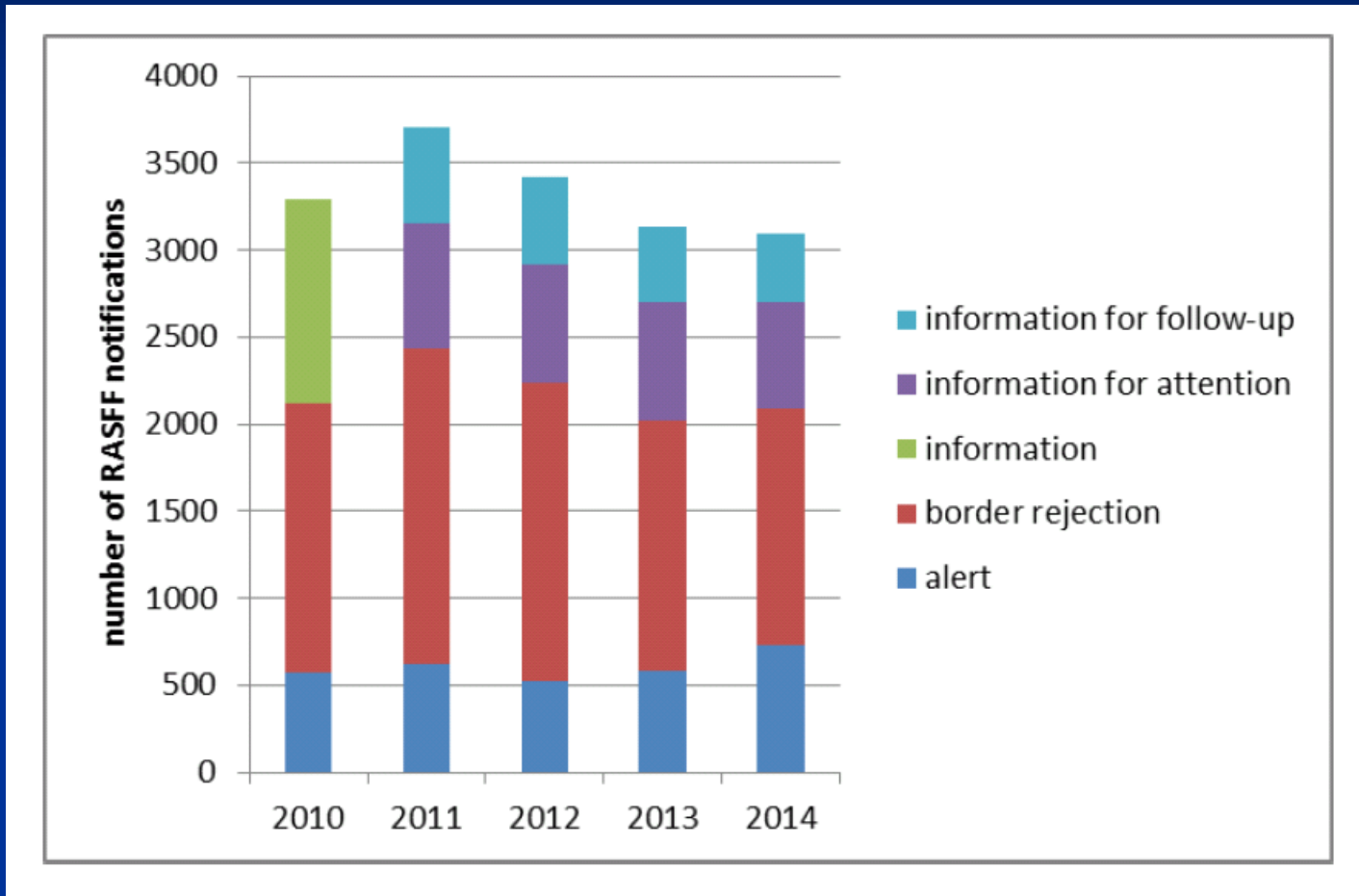
USDA-FSIS Recall Trends 2004 - 2014



Trends Food Recalls Canada 2010 - 2014

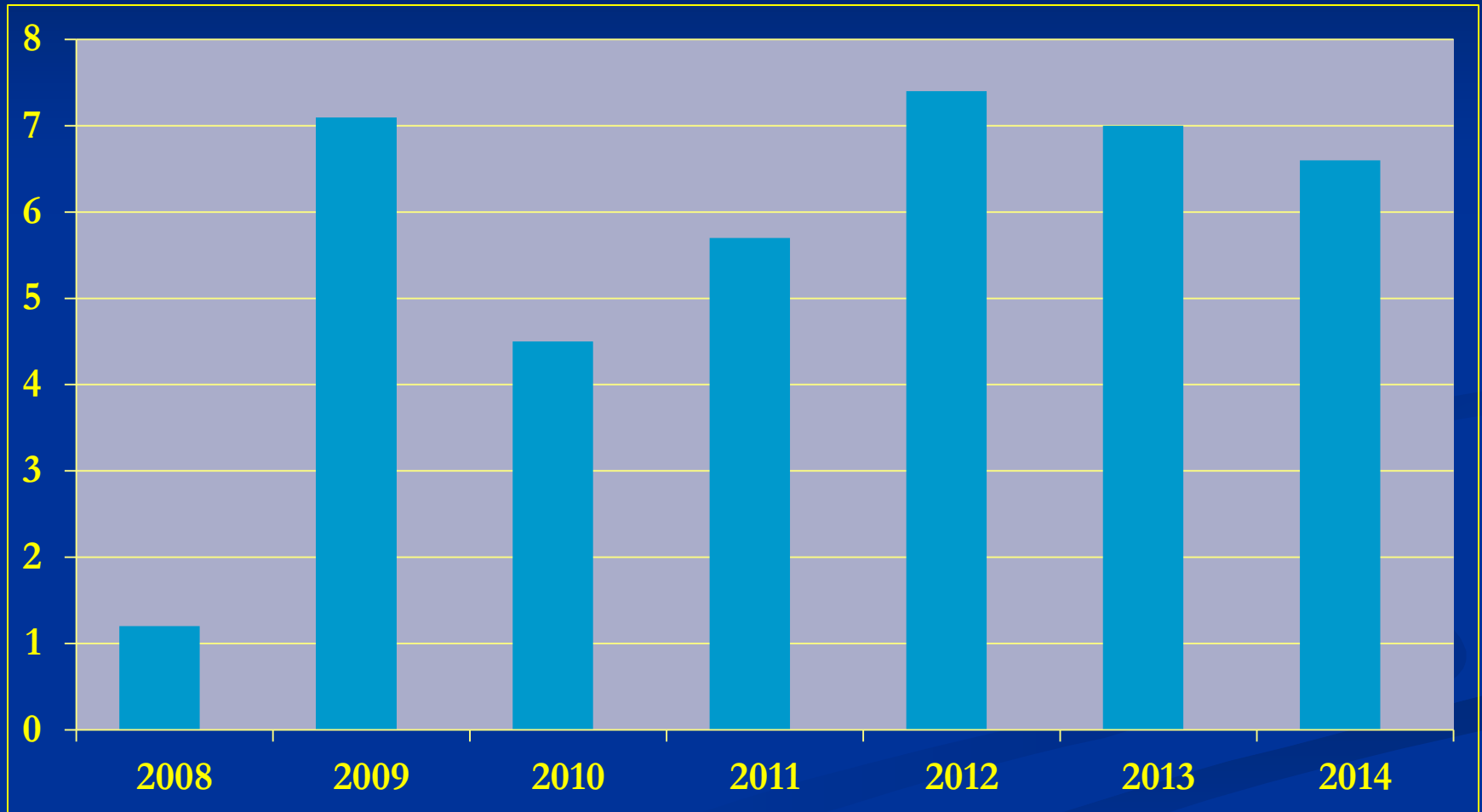


Europe RASFF Trends 2010 - 2014



Source: RASFF 2014 Preliminary Report

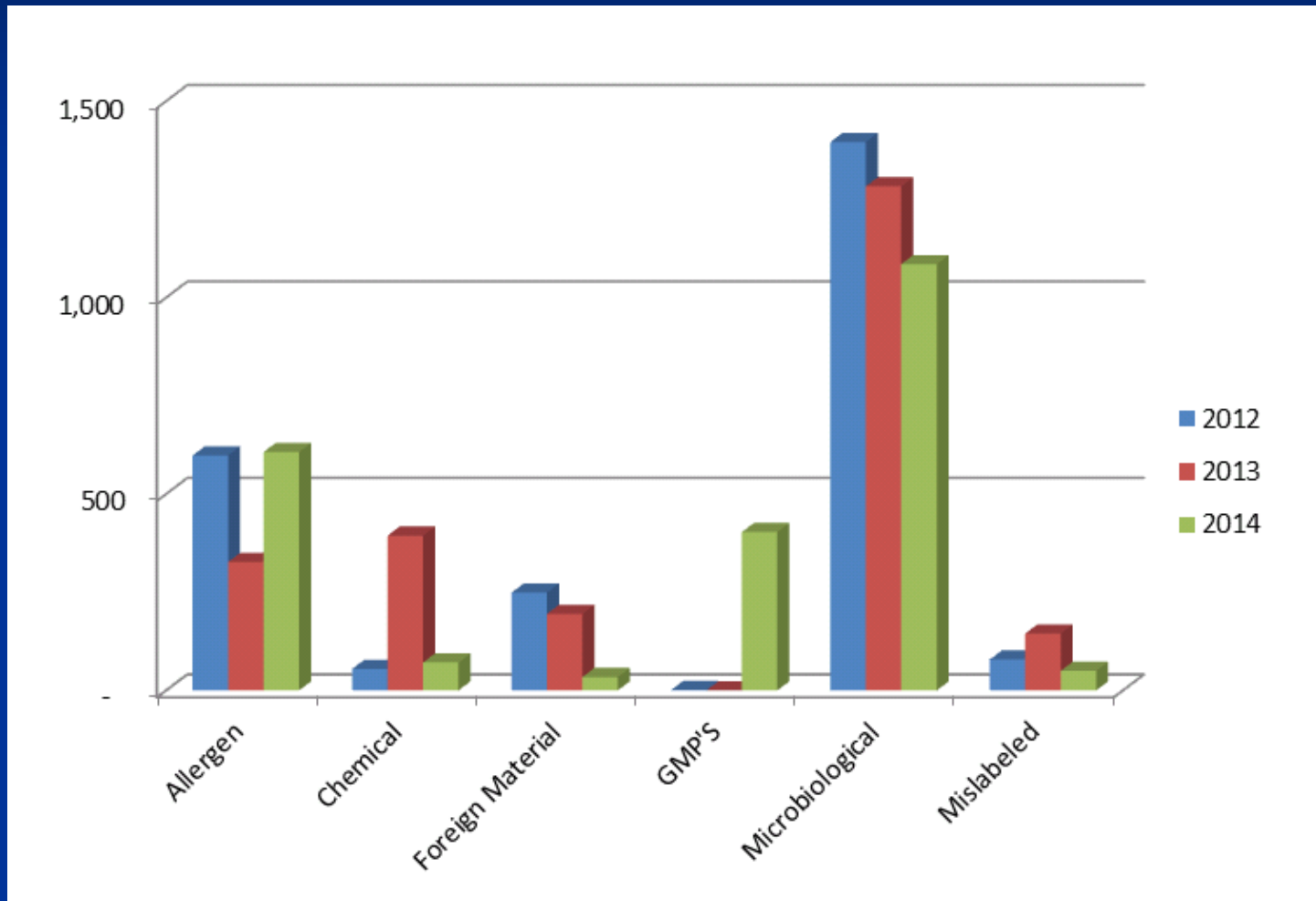
Total Number of Food Product Recalls Per Day in U.S.



Food Recalls on Friday

- U.S. 21%
- Canada 30%
- Europe 25%

Reasons for FDA Food Recalls



Micro Recalls Comparison by Country

■ Microbiological Recalls in 2014 as Percent of Total

■ U.S.

■ Meat 20%

■ Food 46%

■ Canada 25%

■ Europe 37%

Micro Recalls Comparison by Country

- Microbiological Recalls in 2014
- Most Common cause...

- U.S.

- Meat 20% Listeria, E. coli O157:H7

- Food 46% Listeria, Salmonella

- Canada 25% Listeria, Salmonella

- Europe 37% Listeria, Salmonella

Allergen Recalls Comparison by Country

■ Allergen Recalls 2014 as Percent of Total

■ U.S.

■ Meat 47%

■ Food 26%

■ Canada 65%

■ Europe 21%

Allergen Recalls Comparison by Country

- Allergen Recalls 2014
- Most Common cause...
 - U.S.
 - Meat 47% Soy, Wheat
 - Food 26% Wheat, Milk
 - Canada 65% Milk, Wheat
 - Europe 21% Wheat, Milk

Major Contributing Factors to Recalls

Major Contributing Factors to Recent Recalls

- Non-Compliance with current **Good Manufacturing Practices** (published 1978)
- Failure to maintain food processing facilities and equipment
- Non-Compliance with their own SOP's
- Weaknesses in HACCP analysis
 - Knowledge of their product
 - Knowledge of their supply chain
- Traceability – inability to track product

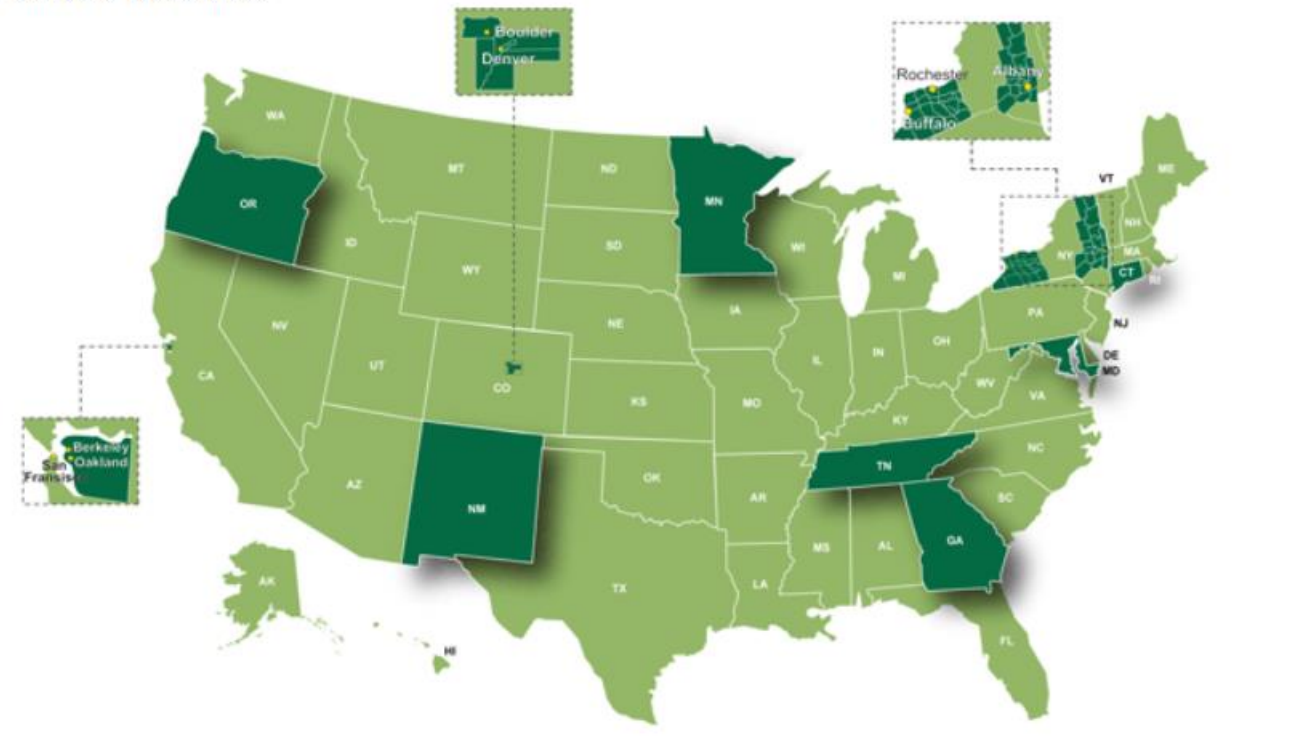
Why the increase in Food Safety Issues?

Why the Change?

- Food production consolidation
- Product changes
 - Complexity
 - Extended shelf life
 - Global impact
- Complexity of food distribution
- Consumer has changed
- Science has changed
- Epidemiology

U.S. Centers of Disease Control Foodnet Sites 2014

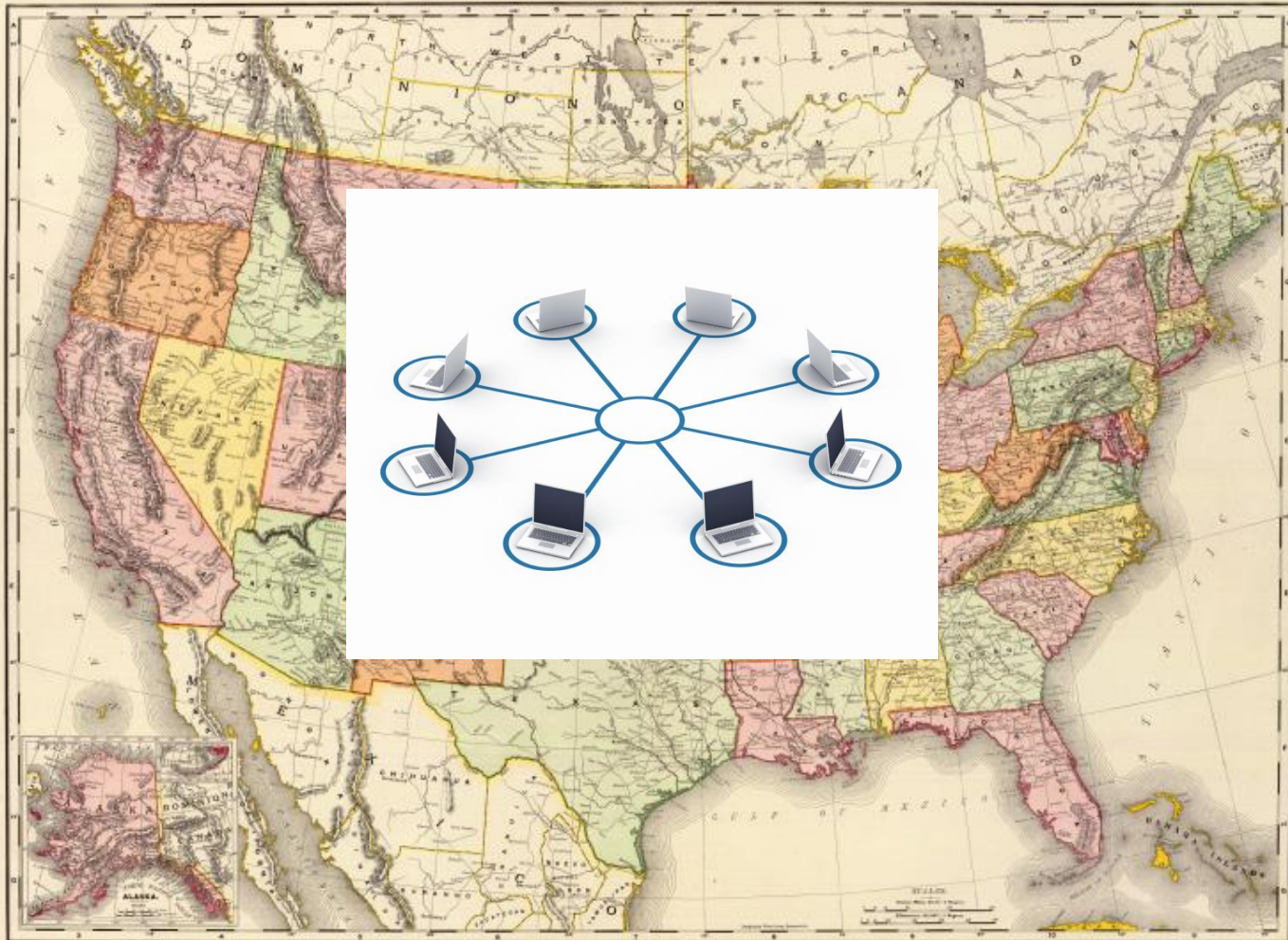
FoodNet has sites in 10 states. Click on the state of interest to visit that state's web site.



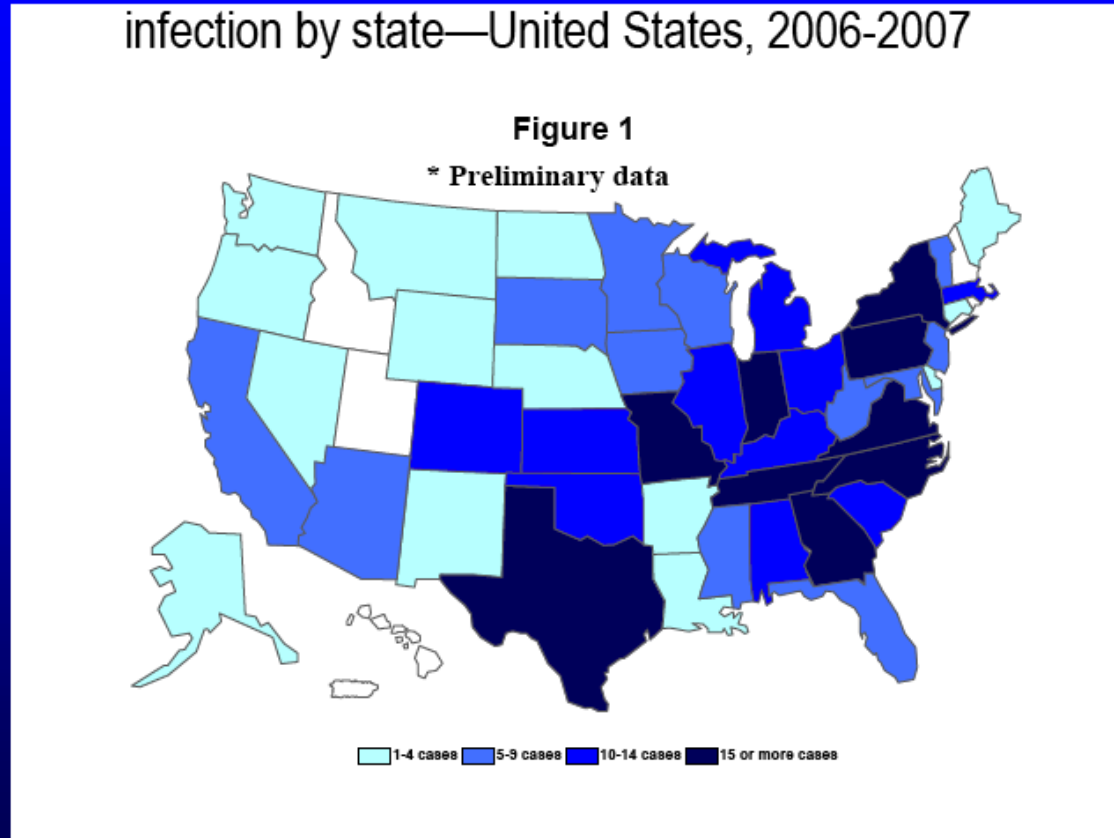
Center of Disease Control Pulse Net “DNA Technology”



Electronic Communications



Confirmed cases (N=453)* of *Salmonella* Tennessee infection by state—United States, 2006-2007

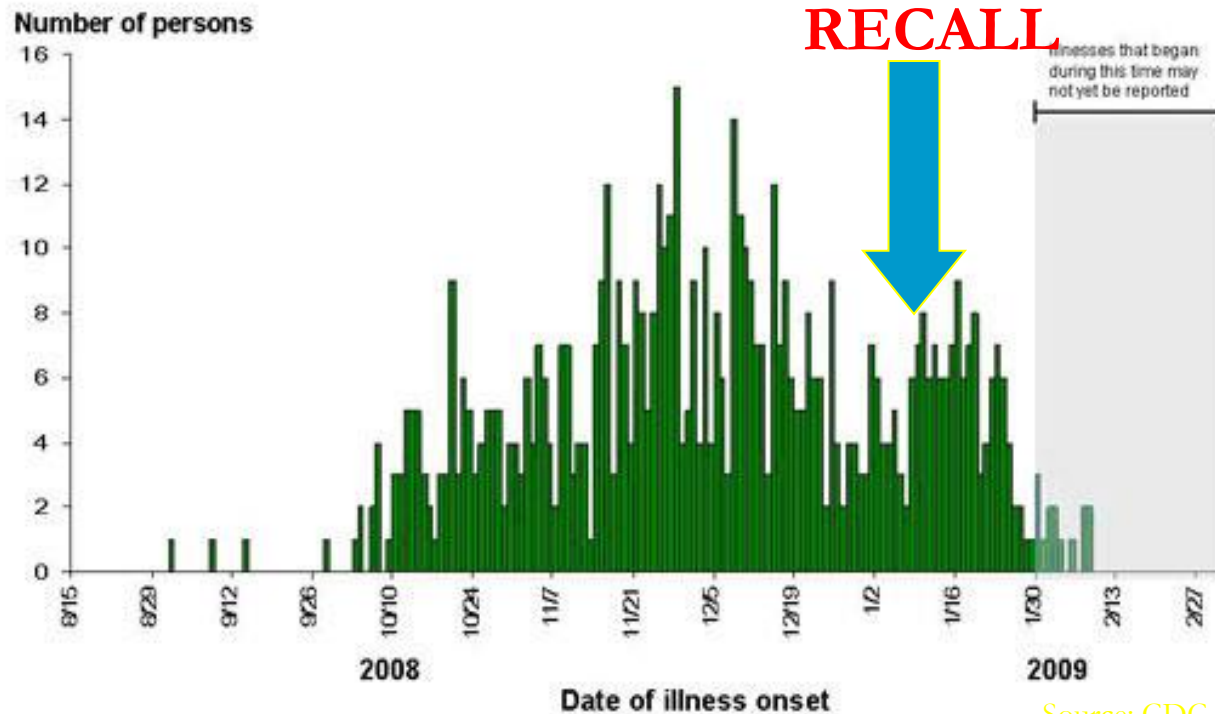


*Confirmed cases with date of illness onset reported as of 1:00 p.m. EDT on March 14, 2007.

Slide Compliments of Dr. Art Liang Center of Disease Control and Prevention

Peanut Paste 2009

Infections with the outbreak strain of *Salmonella* Typhimurium, by date of illness onset*
(n=662 for whom information was reported as of March 1, 9pm EDT)



*Some illness onset dates have been estimated from other reported information

Source: CDC 030609

Epidemiology Advancements on the Horizon

Other Advancements

- FoodNet
- CDC Pulsenet information
- Sampling results
- FDA Reportable Food Registry
- Open sources of information
 - Monitoring Social Media Information
- Regulatory inspection changes
- New generation of testing

PulseNet Growth

PulseNet networks



What does this tell us?

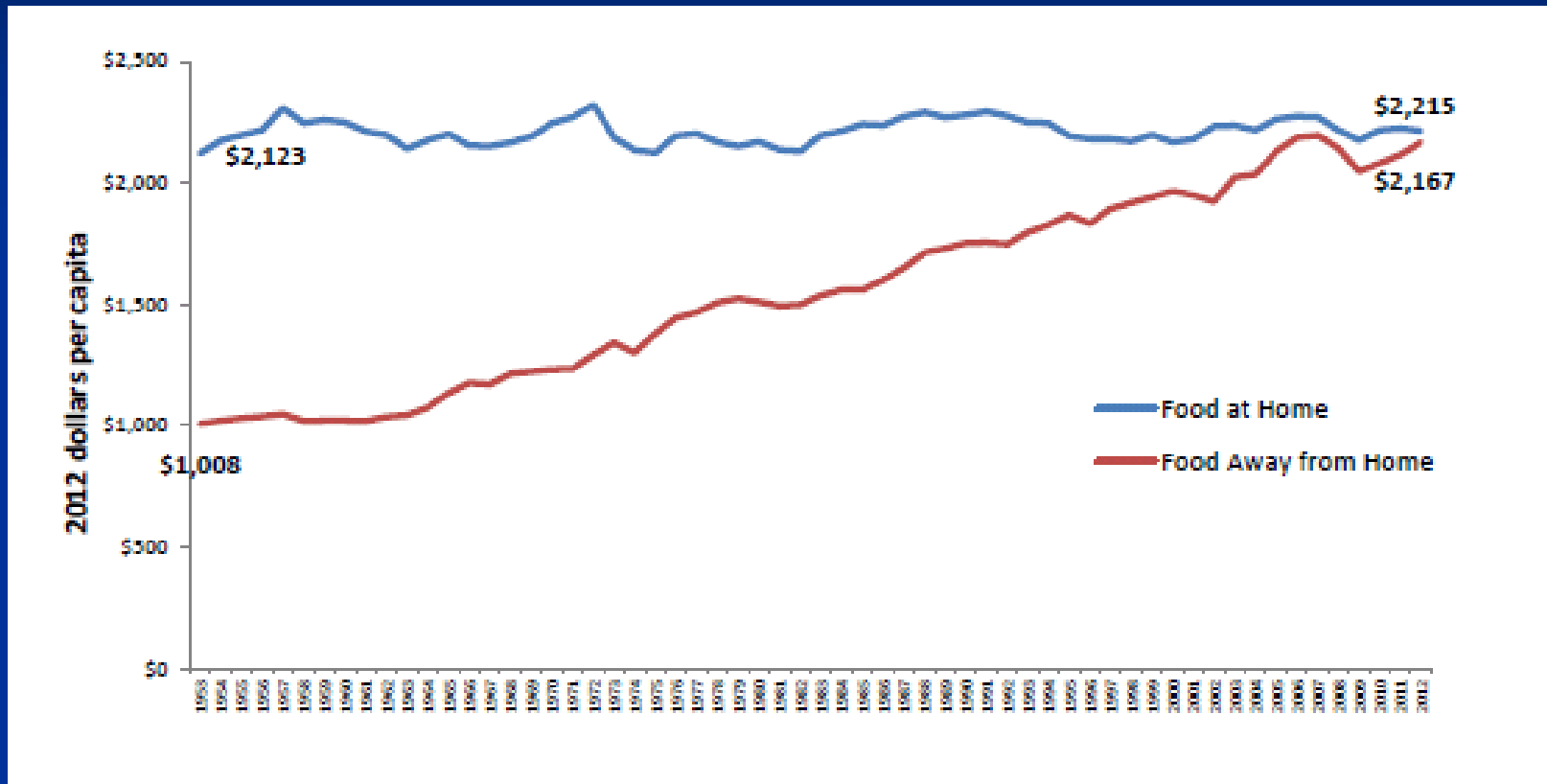
- Electronic communications
- DNA technology
- Identification of commonality
- Identification of a food and/or an ingredient

Consumer Reaction To Food Safety

Consumer Confidence in Food Safety USA

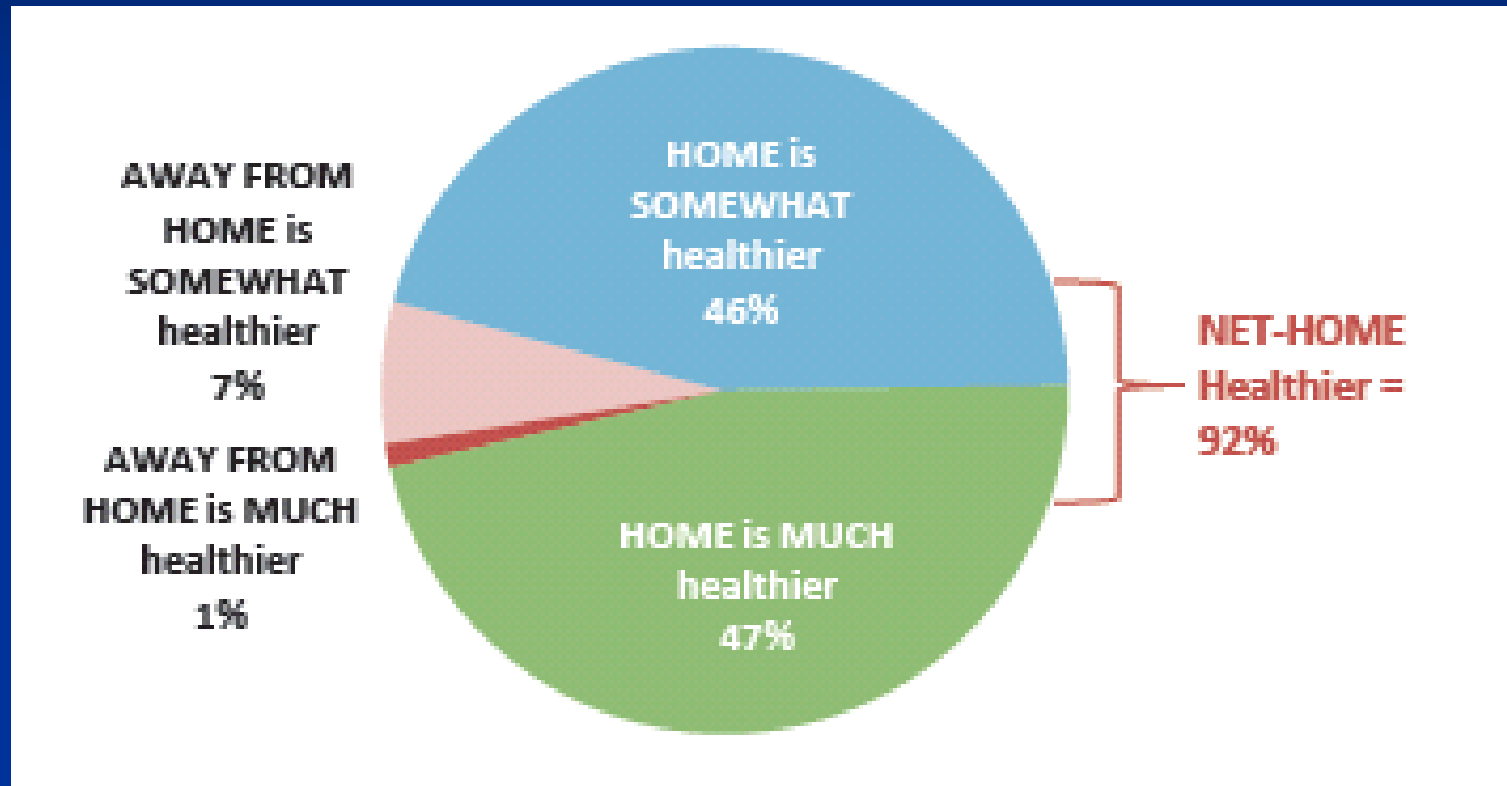


Trends in Location of Food Consumption



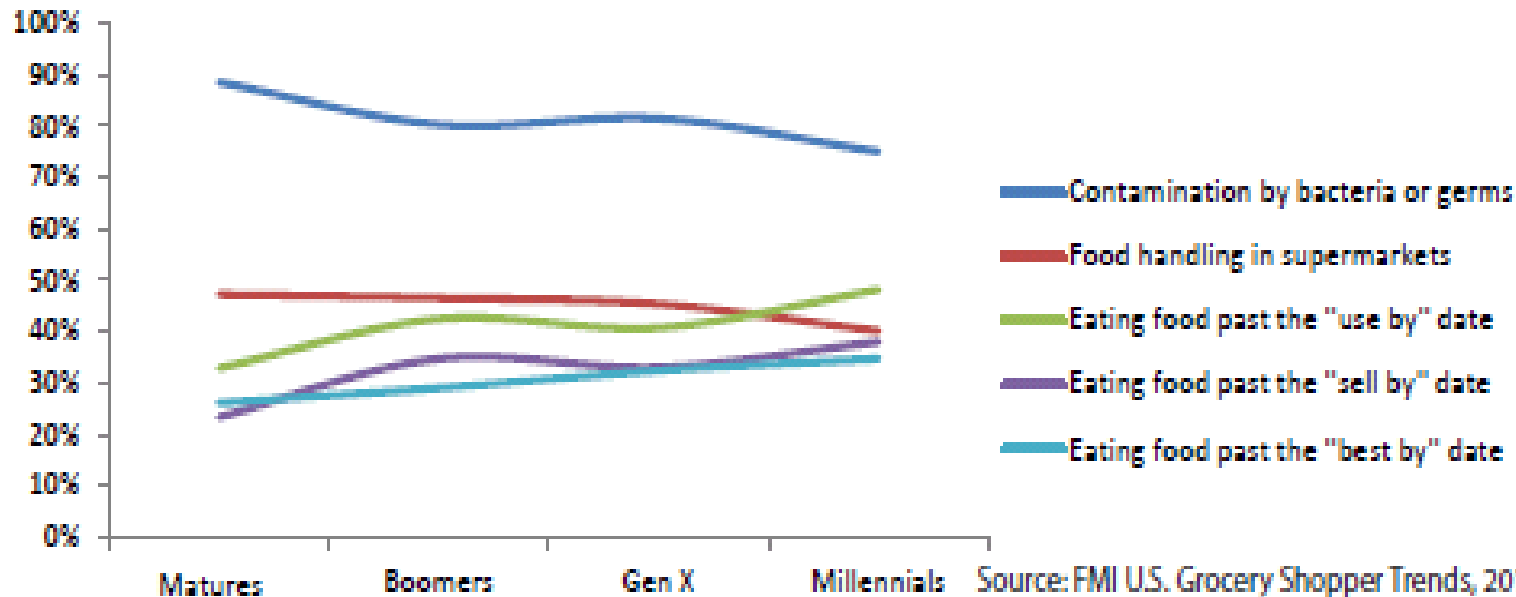
Source: USDA Economic Research 2012

Believe Eating at Home is Healthier Than Eating Out



Source: FMI Trends 2014

Perceived Health Risks



Source: FMI U.S. Grocery Shopper Trends, 2014. N=1,059.

Source: FMI Trends 2014

Confusion with Open Dating



Source: FMI Trends 2014

Perceptions of Date Labeling

An IFT Publication July 2014

Applications and Perceptions of Date Labeling of Food

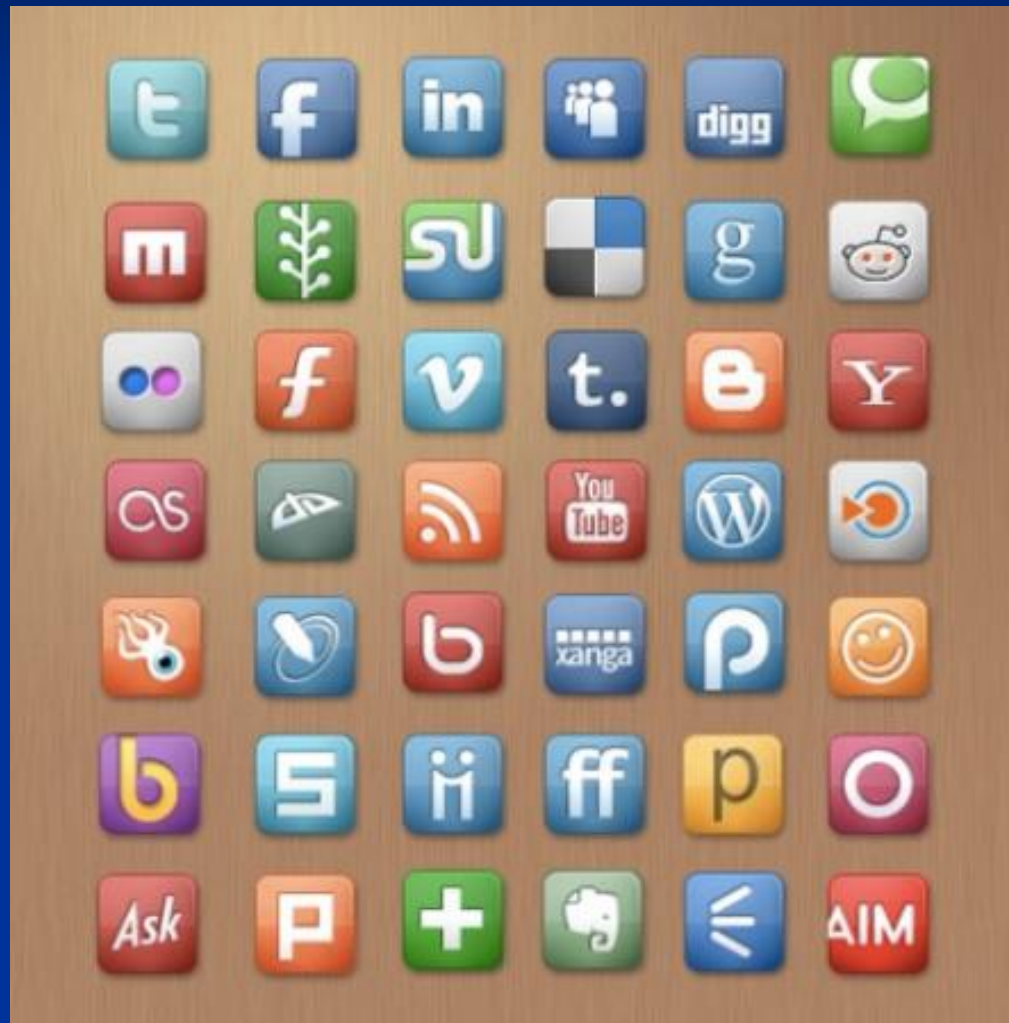
<http://onlinelibrary.wiley.com/doi/10.1111/1541-4337.12086/pdf>

Who Shoppers Rely on to Ensure Food Safety

Number of Shoppers: n=2,116	Year					
	2009	2010	2011	2012	2013	2014
Myself as an individual	55%	51%	58%	58%	58%	63%
Governmental institutions	32%	27%	28%	30%	32%	43%
Food stores	25%	29%	28%	32%	36%	42%
Manufacturers/Food processors	33%	29%	35%	37%	38%	38%
Farmers	8%	10%	10%	15%	19%	19%
Consumer groups	12%	10%	9%	12%	15%	18%

Source: FMI Trends 2014

The Power of Social Media



Power of Social Media

- Houston MOM
- School Lunch
- Social Media
- 258,000 Tweeters
- 41 Congressman told Sec of Ag end “Pink Slime”
- Within days plants closed
- What did it cost consumers?



Lean Finely Textured Beef



Economics of Food Safety Failures

Product Recalls Are Costly

- Preliminary recall costs reported by firms of recent recalls:

- \$56,000,000
- \$35,000,000
- \$60,000,000
- \$30,000,000
- \$37,000,000
- \$103,000,000
- \$78,000,000
- Some firms cease business



- These costs do not include litigation costs

Economics of Food Safety

Not Included in these Cost

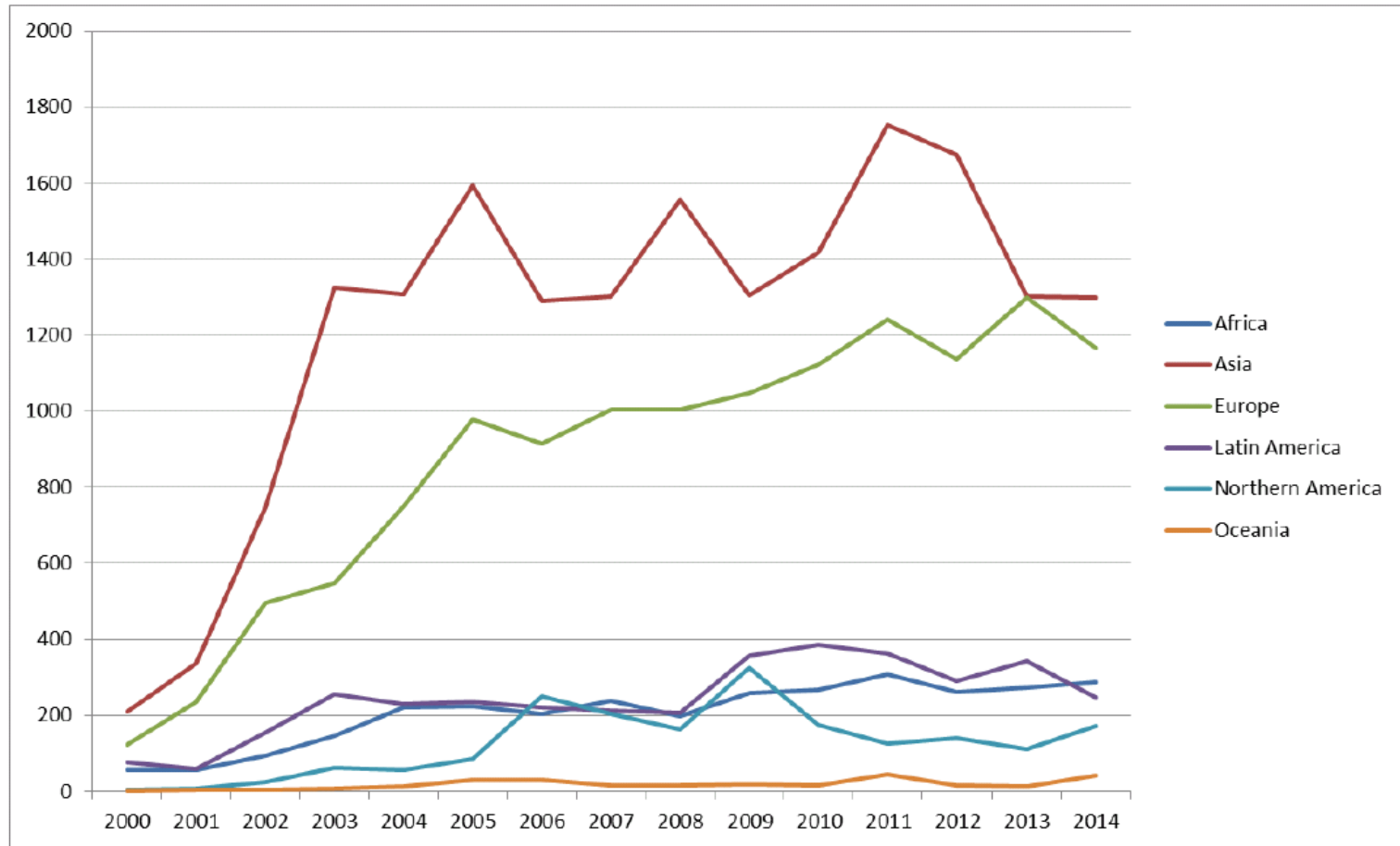
- Does not include the cost in lost sales
- Cost of restoring the business
- Loss of profits
- Loss of jobs
- Damage to brand value
 - Short term
 - Long term

Food Safety Under the Magnifying Glass

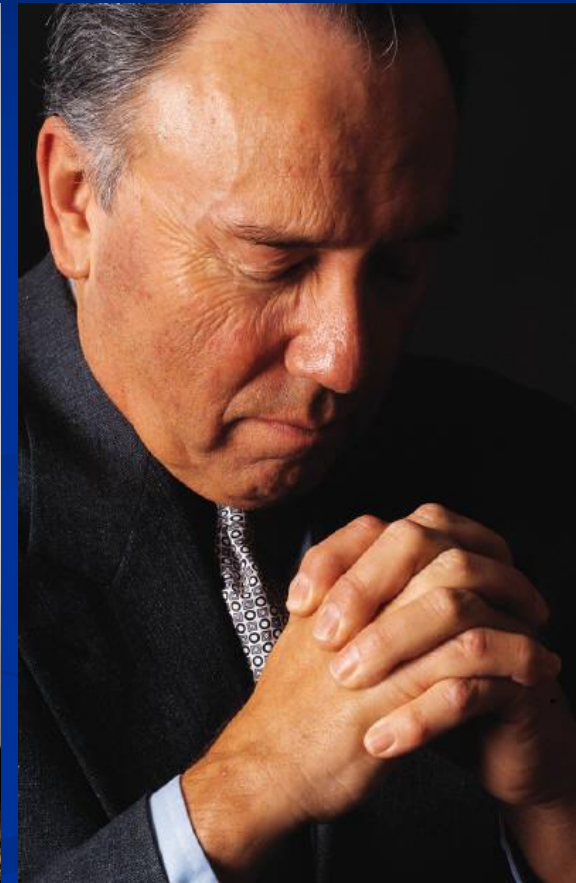


RASFF Reports

2000-2013 notifications by world region



Food Safety is more than ...



FDA Food Safety Modernization Act 2011 (FSMA)

U.S. Food Safety Modernization Act of 2011

- Improving Capacity to Prevent Food Safety Issues
- Improving Capacity to Detect and Respond to Food Safety Problems
- Improving the Safety of Imported Foods

Status Report on FSMA

Foundational Section	Final Rule expected to be Published by	Effective Date of Final Rule	Projected Compliance Date
Preventative Controls – Human Food	August 30, 2015	October 29, 2015	October 28, 2016
Preventative Controls- Animal Food	August 30, 2015	October 29, 2015	October 28, 2016
Produce Safety Rule	October 31, 2015	December 30, 2015	December 29, 2017
Foreign Supplier Verification Program	October 31, 2015	December 30, 2015	June 22, 2017
Accreditation of Third Party Auditors	October 31, 2015	December 30, 2015	TBD
Sanitary Transportation	March 31, 2016	May 30, 2016	May 30, 2017
Intentional Adulteration	May 31, 2016	July 30, 2016	July 30, 2017
Designation of High Risk Foods requiring special traceability	TBD	TBD	TBD
Amendments of FDA Reportable Food Registry (RFR) requiring retailers to post recalls	TBD	TBD	TBD

FSMA Implementation

- Major training project
- Culture Change
 - From reactionary to preventive regulatory

Responsibilities

Our Responsibilities

- *Moral*

- To do what is right for our customers

- *Legal*

- To meet regulatory requirements

- Both as a Corporation and each of us Personally

Food Safety

A Shared Responsibility



Thank You!



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