

Retail & Consumer Expectations for Hygienic Design

May 14, 2019

Minneapolis, MN

By

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[illegible]

The World of Food Safety Changed in 2007



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Food Safety Changed in 2007

- Spinach and Carrot Juice – September 2006
- Peanut Butter – February 14, 2007
- Contaminated Pet Food with Melamine – March 16, 2007
- Chili July 12, 2007
- Consumer voice concern regarding human food

Food Safety Changed in 2007

- Key driving force was:
- Contaminated Pet Food Contaminated with Melamine – March
- Consumer voiced concern regarding human food – April, May and June 2007
- “If this was in pet food what maybe in the food I am feeding my family?”
- Questions about food and ingredients

Food Safety Changed in 2007

- Consumer's took charge of food safety in attempting to protecting their families!
 - Buy local
 - Buy organic
 - Buy natural
 - Clean label
 - Artisan

Food Safety Changed in 2007

- Trend to buy local / buy Organic / Artisan
- Major changes in the what we eat
 - Good or Bad?
- Created food safety issues
 - The change highlighted weaknesses in the marketplace

Food Safety Changed in 2007

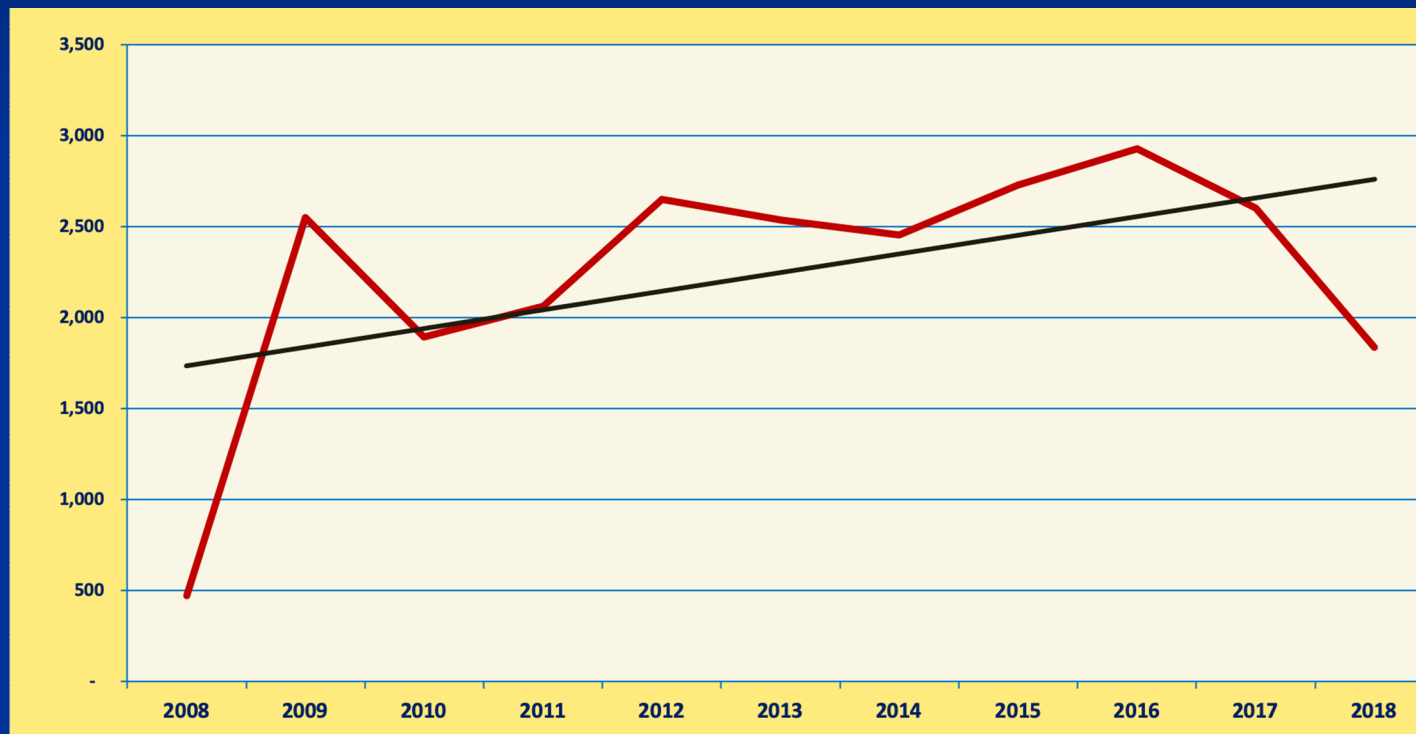
- Timing is everything!
- June 29, 2007

iPhone Launched June 29, 2007

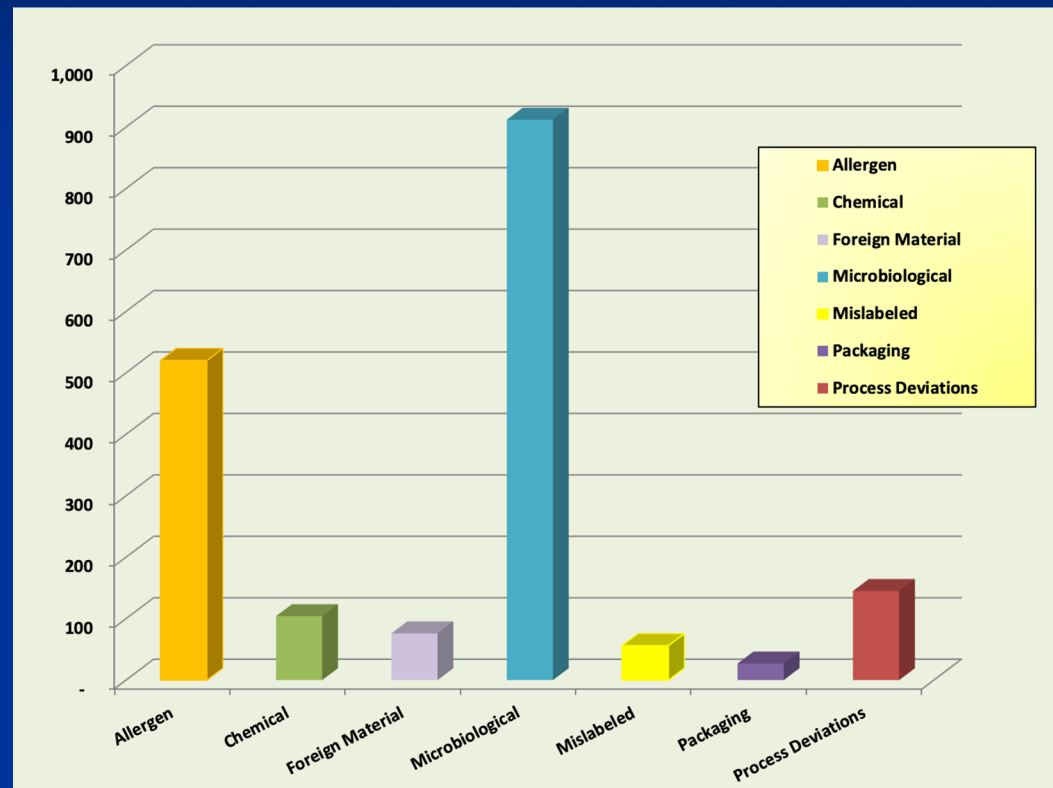


Twitter
Facebook
You Tube
Electronic
Marketing

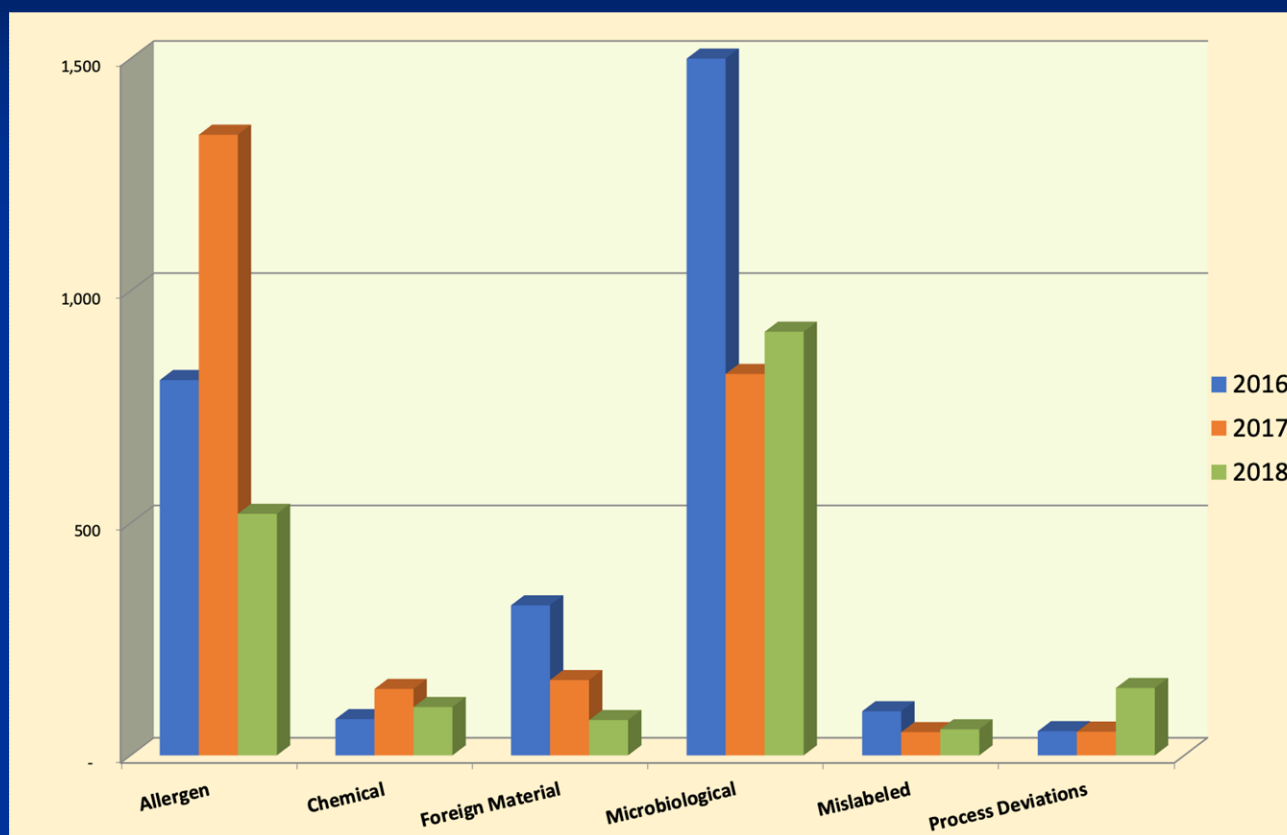
FDA Trends by Number of Recalled Products



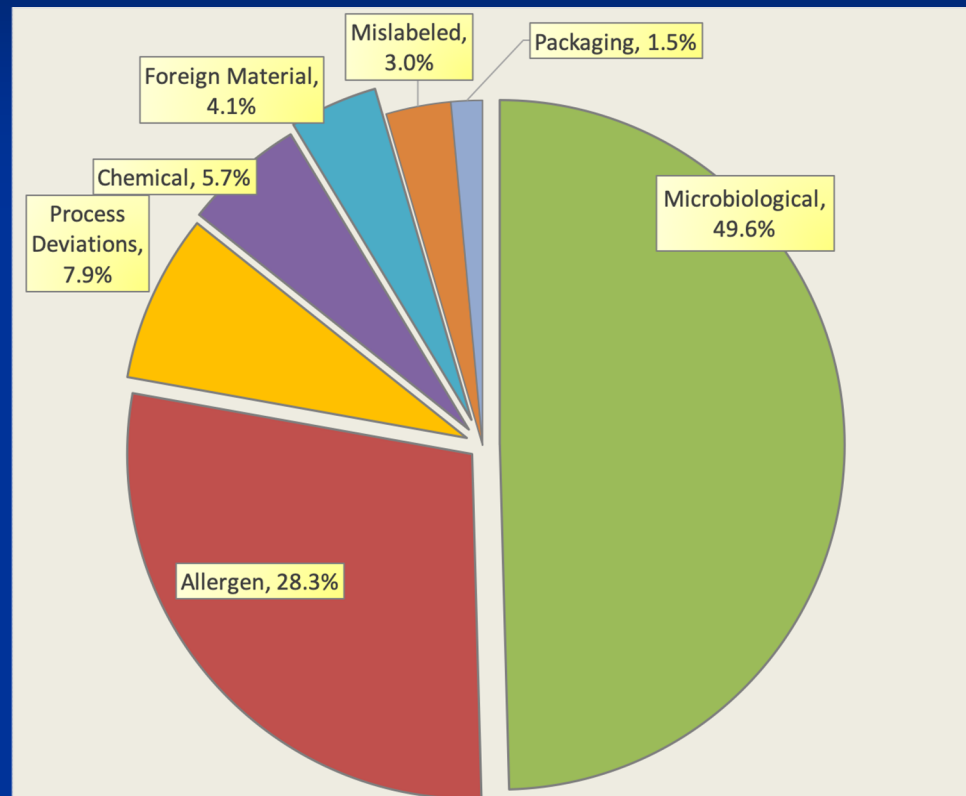
Recalls By Reasons: 2018



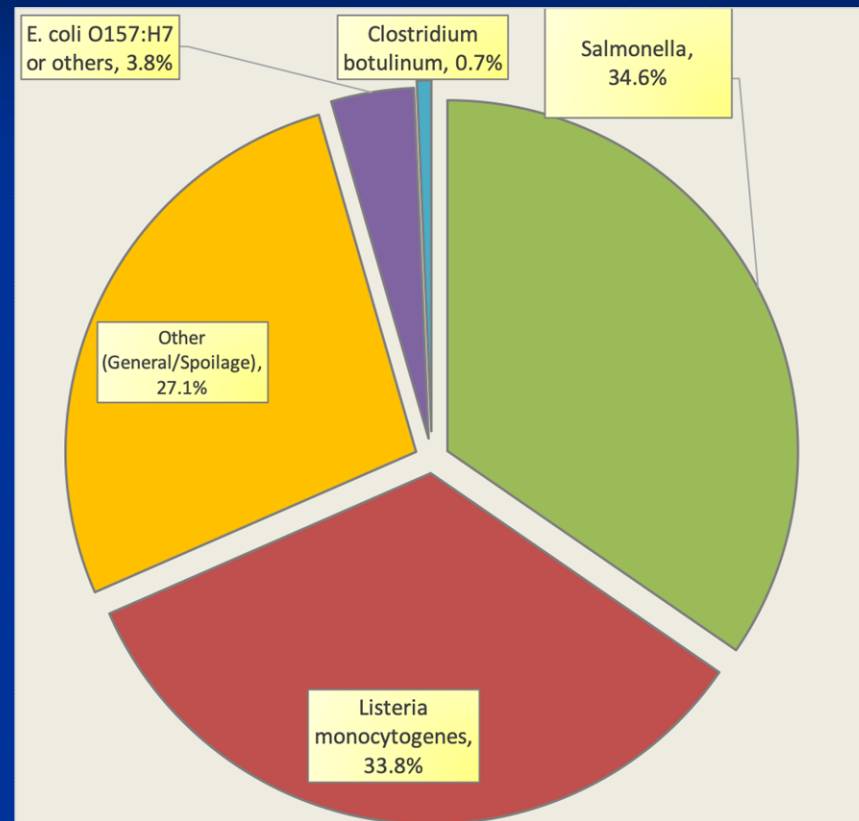
Recalls By Reasons: 2016-2018



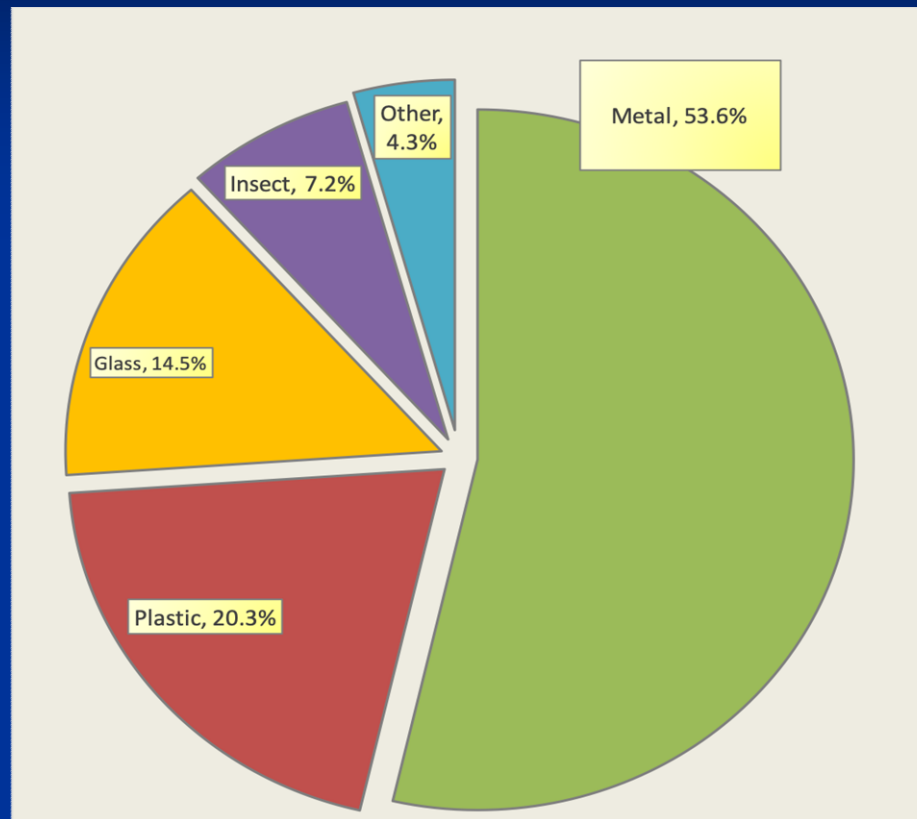
Recalls By Reasons: 2018



Micro Reasons: 2018



Foreign Material Trends: 2016-2018



FDA Inspection Result 2018

■ Foods

- FDA issued 2583 “483’s” in 2018
- >50% of the 483’s identified ten CFR references
- These are related to food facilities and equipment design and maintenance for food safety

FDA Inspection Result 2018

■ Citations by CFR

- 117.10 Personnel
- 117.20 (b) Plant Construction and Design
- 117.35 (a) Sanitary Operations – Plant Maintenance
- 117.35 (c) Pest Control – Building Maintenance
- 117.35 (d) Sanitation of Food Contact Surface
- 117.37 Sanitary Facilities and Control

FDA Inspection Result 2018

- 117.40 Equipment and Utensils - Design & M
- 117.80(c) Manufacturing, Processing, Packaging, Holding – Controls
- 110.20(b)(4) Floors, Walls and Ceilings
- 123.80(b)(2) Manufacturing Conditions
- 123.11 (b) Sanitation monitoring

Why the Change?

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

Evolution of Epidemiology

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Evolution of Epidemiology Tools

- FoodNet - 1996
- PulseNet – 1996
 - Nationwide – 2001 Now World Wide
- Pulsed-field Gel Electrophoresis (PFGE) - 1984
- DNA Fingerprinting Technology – 2005
- FDA Reportable Food Registry - 2007
- FDA, USDA, CDC CORE Team Investigations
- Regulatory Inspections – Swabs – 2010
- Whole Genome Sequencing – 2013
- WGS now in all state laboratory as of March 26,2019

January 2007*

Cases of *Salmonella* Tennessee (outbreak profile)
by month, USA 2004 - 2006

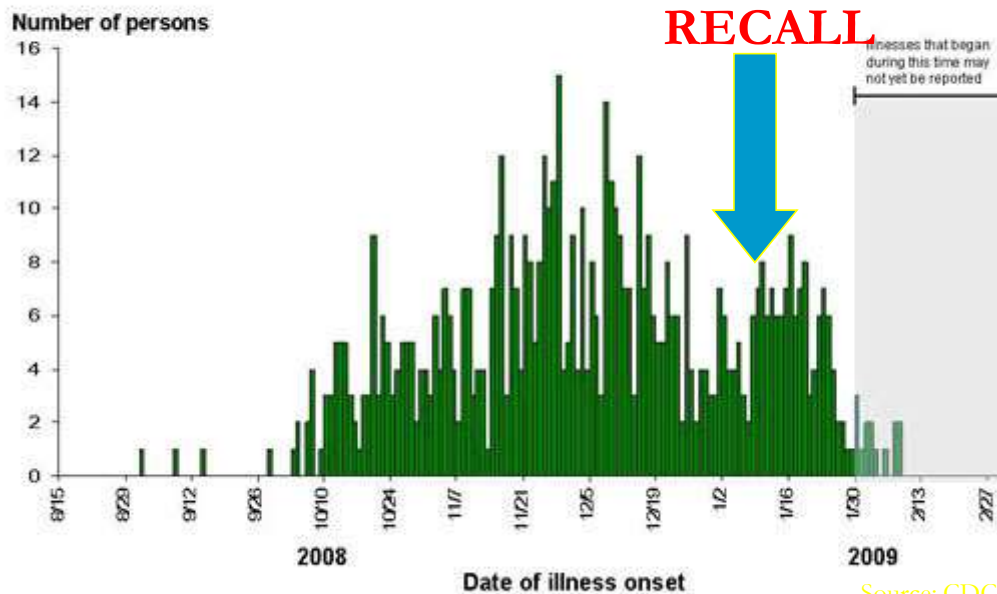
* Preliminary data



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

Peanut Paste 2009

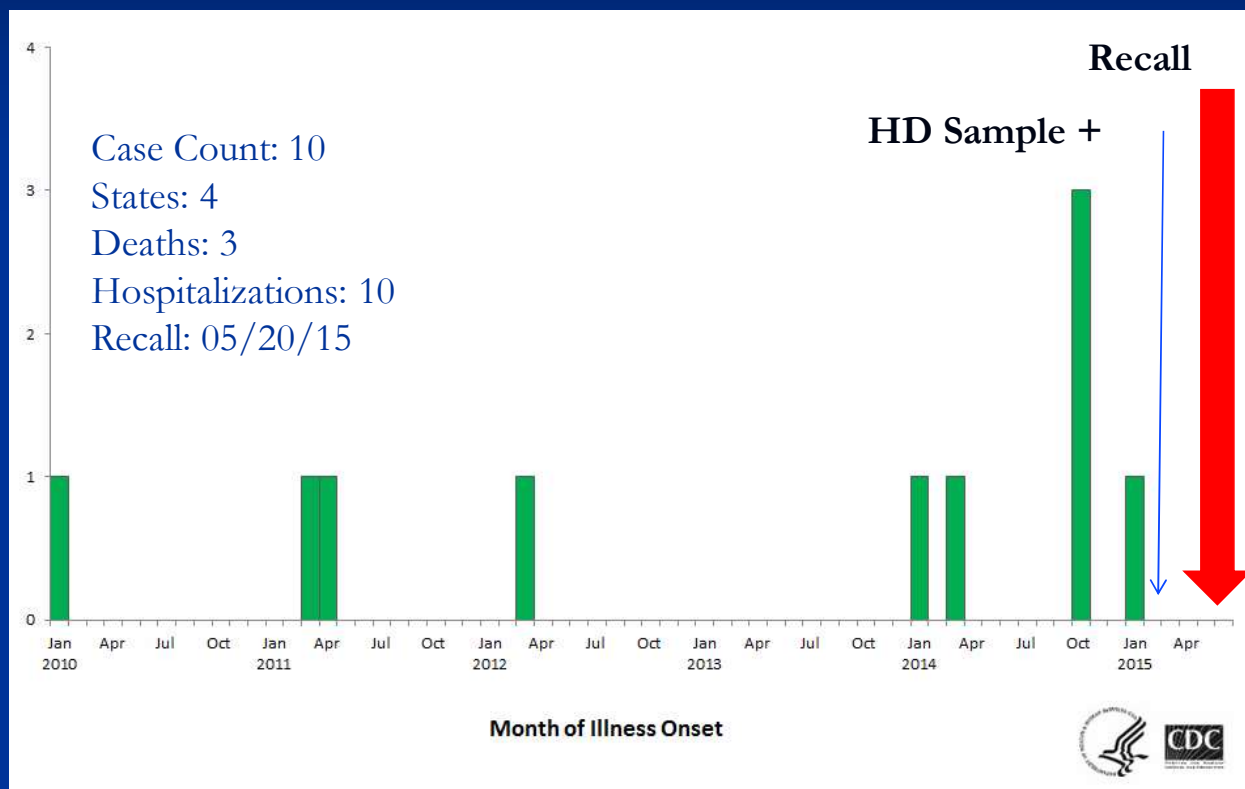
Infections with the outbreak strain of
Salmonella Typhimurium, by date of illness onset*
(n=662 for whom information was reported as of March 1, 9pm EDT)



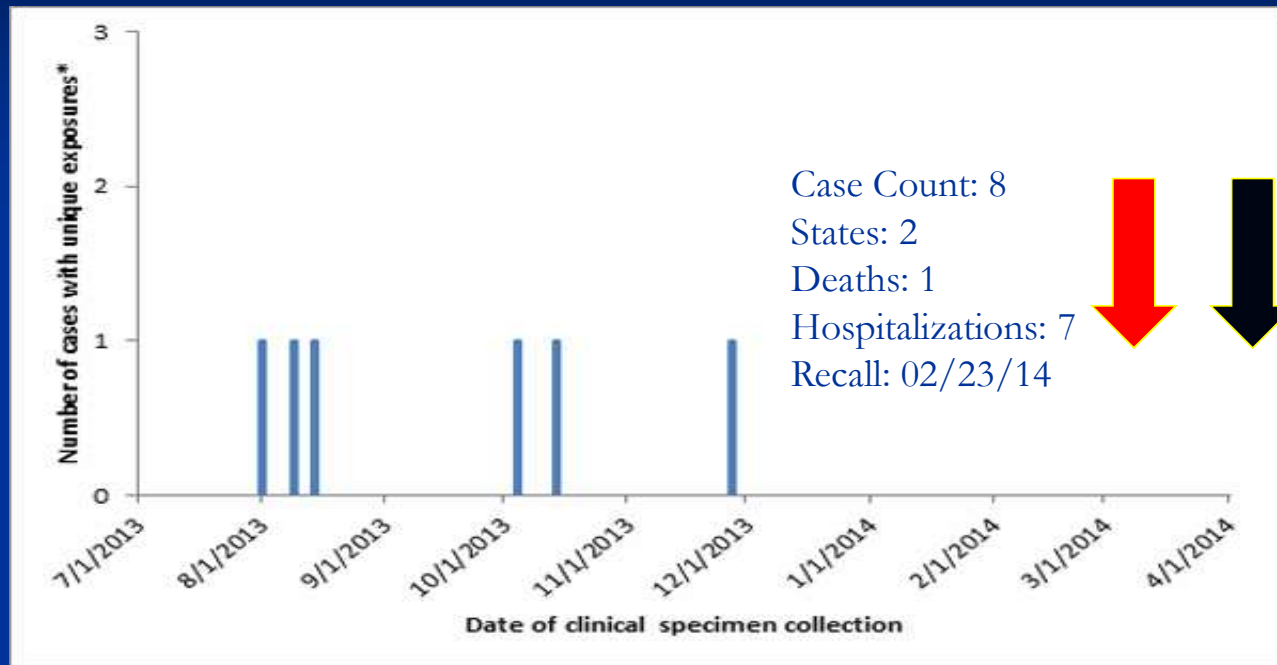
*Some illness onset dates have been estimated from other reported information

Source: CDC 030609

Ice Cream 2015



Cheese Products



February 21, 2014 CDC Report of Illnesses

FDA Inspection February 18 to March 4, 2014

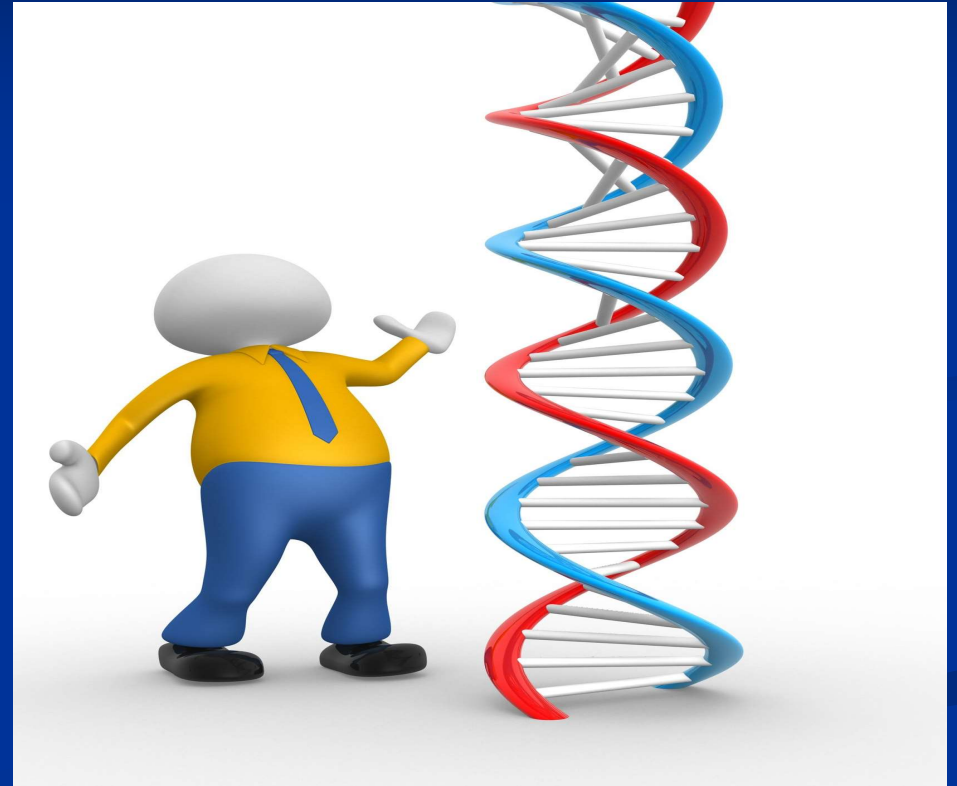
FDA Suspended Facility Registration March 11, 2014

U.S. Justice Dept. Announced Fine and Permanent Injunction March 3, 2016

Evolution of Epidemiology

- Electronic communications
- DNA technology advancements
- Identification of commonality
- Identification of a food and/or an ingredient
- Patient sample
- Swab-a-thon (FDA inspections)
- Data base of over 50,000 finger prints on file that traces back to mid 1990's
- Whole Genome Sequencing includes state labs

We live in a Micro World



Whole Genome Sequencing

- WGS Technology can identification of:
- A group of ill consumers
- A common product
- A manufacturer

Whole Genome Sequencing

- WGS Technology can identification of:
- A group of ill consumers
- A common product
- A manufacturer
- An area of a production plant
- A piece if equipment

Consumer Concerns Regarding Food Safety

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Consumer Confidence in Food Safety

■ Grocery Stores 88%

■ Restaurants 75%

U.S. Grocery Shopper Trends 2018

Whom Consumers Rely on to Ensure What Foods to Purchase 2018

- Themselves 58%
- Government 50% FDA, 49% USDA
- Grocery Store 45%
- Food Manufacturing 37%
- Consumer Groups 23%
- Farmers 17%

U.S. Grocery Shopper Trends 2018

Consumer Believe Where Food Safety Problems Most Likely Occur

■ Food Processing	47%
■ Warehouse	11%
■ Transportation	5%
■ Store	4%
■ Restaurant	11%
■ Home	6%
■ Unsure	12%

Conditions Consumer Believe Pose Some/Serious Health Risk

■ Microbiological	75%
■ Pesticides	71%
■ Product Tampering	59%
■ Terrorism	49%
■ Antibiotics / Hormones	62%
■ Food from China	52%
■ GMO	47%
■ Irradiated Foods	38%

U.S. Grocery Shopper Trends 2018

Source of Foodborne Illness

1. Consumer's home
2. Food Service
3. Food Manufacturing
4. Retail

Sanitary Design

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Importance of Sanitary Design

■ FDA

Environmental Swabs Results 2017 & 2018

■ Sampled 89 ice cream plants in 32 states

- Detected *Listeria monocytogenes* in 19 (21.3%)
- Detected *Listeria monocytogenes* on non food contact surfaces in 18 of the 19 plants
- One plant on food contact surface

Sanitary Design

- Food Contact
- Support structures
- Installation

Sanitary Design

- Food Contact
- Support structures
- Installation
- Human Factors

Litigation

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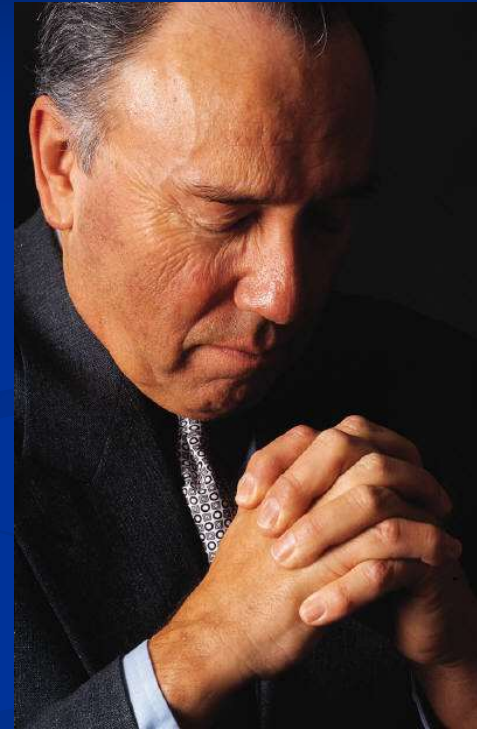
Importance of History

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

Source: Winston Churchill



Food Safety is more than ...



Responsibilities

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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

Complacency

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Complacency

WE Cannot Accept A Complacent
Attitude With

FOOD SAFETY

Meeting Consumer Expectations

Food Safety



Food Safety

A Shared Responsibility



Food Safety is a Journey Not a Destination!

You must continue to strive for
improvements each and every day
in fulfilling consumer expectations.

Thank You!



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