

# Food safety culture

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# *Listeria* in Cantaloupe, Colorado 2011

- 33 dead
- 146 sickened
- Producers blame auditors, auditors blame government
- Producers lose, consumers lose



# Salmonella in mangoes

- 121 sick U.S.
- 25 hospitalized
- 22 sick Canada



# Salmonella in cantaloupe, 2012

- 3 dead
- 270 sick
- 78 hospitalized



<http://www.cdc.gov/salmonella/typhimurium-cantaloupe-08-12/index.html>

<http://barfblog.foodsafety.ksu.edu/blog/155929/12/08/28/2-dead-178-sick-are-consumers-responsible-salmonella-field-or-packing-shed-fda->

# Cantaloupe: Not worth the risk

“We’ re done. No more cantaloupe. We will let someone else raise the cantaloupe. We have already towed the equipment out of the building. It’ s not worth the liability.”

– Jimmy Burch, co-owner of Burch Farms, Aug. 30/12



A table of cantaloupe-related outbreaks is available at <http://bites.ksu.edu/cantaloupe-related-outbreaks>

# Cantaloupes linked to Salmonella outbreak

*50 illnesses in Canada and the United States associated  
with Honduran cantaloupe grower*

www.foodsafety.ksu.edu  
foodsafetyinfosheets.ksu.edu

On March 22, 2008 the U.S. Food and Drug Administration advised consumers not to eat cantaloupes from a Honduran grower because they were contaminated with *Salmonella* Litchfield. The outbreak has so far caused over 50 illnesses in 16 states, and at least nine in Canada. Warnings and recalls related to cantaloupes are common, as they are always in the top 5 list of fruits and vegetables for outbreaks. This is largely due to their growing conditions and the potential to support the growth of bacteria.

As research has shown a potential for bacteria to be pushed into the meat of the cantaloupe during slicing, many authorities recommend washing the cantaloupe before cutting. However, due to the roughness of the rind, it is very difficult to wash away much of the bacteria. Using a scrub brush under running water (especially at the cut point) can reduce the risk of *Salmonella*.



## What you can do:



- Make sure you refrigerate cantaloupes as soon as they have been sliced up. Bacteria such as *Salmonella*, can grow nicely on the orange meat of the fruit at room temperature.
- If you wash the outside of the cantaloupe, vigorously use a scrub brush under running water to remove any easy-to-get to bacteria (and try not to splash the water all around the kitchen).
- Don't wash many cantaloupes at once by soaking in a sink. This could lead to *Salmonella* transfer from one fruit to another.



For more information contact Ben Chapman [bchapman@uoguelph.ca](mailto:bchapman@uoguelph.ca) or Doug Powell [dpowell@ksu.edu](mailto:dpowell@ksu.edu)

<http://www.youtube.com/watch?v=0TakuTlbk74>

<http://www.youtube.com/watch?v=-v4DYokjwFw>

# E. coli O157 in Romaine lettuce, Dec. 2011, Missouri

- 60 people sick in 10 states
- publicly linked to salad bars at Schnucks
- possibly grown in California
- limited availability of risk information



<http://bites.ksu.edu/leafy-greens-related-outbreaks>

<http://www.barfblog.com/blog/151817/11/12/07/60-sick-e-coli-o157-10-states-it-was-romaine-lettuce-grown-california-served-sc>

# *E. coli* O157 outbreak on strawberries in Oregon

- 1 dead 14 sick
- Deer droppings caused outbreak
- Six samples from Jaquith Strawberry Farm in Washington County tested positive for the *E. coli* O157:H7 strain that sickened 15 people and killed one in Oregon
- The positive tests probably indicate that several or perhaps many of the deer around Jaquith's property carry O157:H7



# E. coli O157:H7 in walnuts, Canada

- April 4/11, Canadian Food Inspection Agency said people were sick but wouldn't say how many
- Walnuts imported from California and imported by Amira Enterprises of St. Laurent, Quebec named as the suspected source
- Later on April 4/11, Public Health Agency of Canada says 13 sick



# E. coli O157:H7 in hazelnuts

- Majority produced in Oregon
- Salmonella found in 2009
- 13 sickened with E. coli O157:H7 in 2011
- Develop good handling management practices
- Educate growers processors
- No evidence of follow-up, verification, food safety assistance



October

12

2010

Food  
Safety  
Infosheet

www.foodsafetyinfosheets.com

# Fruit compote juice linked to *E. coli* O157 outbreak at festival in Winnipeg

Food handlers should be careful not to contaminate ready-to-eat or drink products

## What you can do:

- Wash and dry hands using soap, potable water and paper towels prior to handling foods.

- When storing food in coolers or fridges, keep ready-to-consume products covered and above items like raw meat that might drip.



## Juices have been linked to outbreaks in the past

- E. coli* O157 contaminated Odwalla brand juices linked to 66 illnesses in 1996
- Salmonella* contaminated Orchid Island Juice Company brands linked to 15 illnesses in 2005
- In 2006, Bolthouse Farms carrot juice was the source of 6 botulism illnesses including a death

## 37 illnesses and 18 hospitalizations linked to outbreak

A fruit juice is the most likely culprit in sickening visitors to a Winnipeg (Canada) festival in August 2010. The majority of illnesses were associated with a Russian combination platter served at Folklorama, an annual heritage celebration. The Russian platter contained borscht (beet soup), meatballs, a rice dish, and the compote juice. The focus narrowed to the juice as ill patrons reported eating both a vegetarian and non-vegetarian dish, with the juice as the only common food.

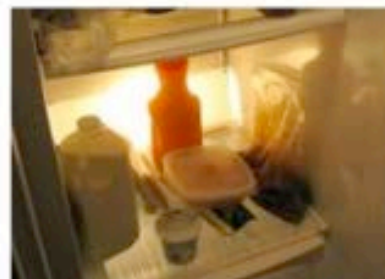
The compote juice was prepared by adding washed, unpeeled apples, blueberries and

blackberries to boiling water. Once boiled for five to 10 minutes, the juice was decanted into large plastic pails. The juice was then refrigerated until served cold.

## Post-boiling contamination likely



As fruits were washed and boiled as part of the juice-making process it's likely that juice was contaminated either by a staff member or through cross-contamination in the fridge. Health officials believe that ground beef, which was also being handled and prepared at the site, was the most likely source of contamination.



FOR MORE INFORMATION CONTACT BEN CHAPMAN, BENJAMIN.CHAPMAN@NCSU.EDU OR DOUG POWELL, DPOWELL@KSU.EDU

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**HOT SUBS**

**Steak**  
**Meatball**  
**Roasted Chicken**  
**Buffalo Chicken**  
**Pepperoni**

(Click on item for nutritional info)

**TOPPINGS**

**Black Olives**  
**BBQ Sauce**  
**Deli Mustard**  
**Fat Free Honey Mustard**  
**Green Peppers**  
**Horse Radish**  
**Hot Pepper Relish**  
**Italian Dressing**  
**Jalapeno Peppers**  
**Ketchup**  
**Lettuce**  
**Marinara**  
**Mayonnaise**  
**Mild Pepper Rings**  
**Mustard**  
**Olive Oil**  
**Onions**  
**Pickles**  
**Sweet Pepper Strips**  
**Tomatoes**

**COLD SUBS**

**Cold Cut**  
(Bologna, Cooked Ham, Salami)  
**Club Combo**  
(Roast Beef, Cooked Ham, Turkey)  
**Italian**  
(Capicola, Peppered Ham, Salami)  
**Ham**  
**Turkey**  
**Roast Beef**  
**Chicken Salad**  
**Tuna Salad**  
**Egg Salad**  
**Veggie**  
**Cheese**

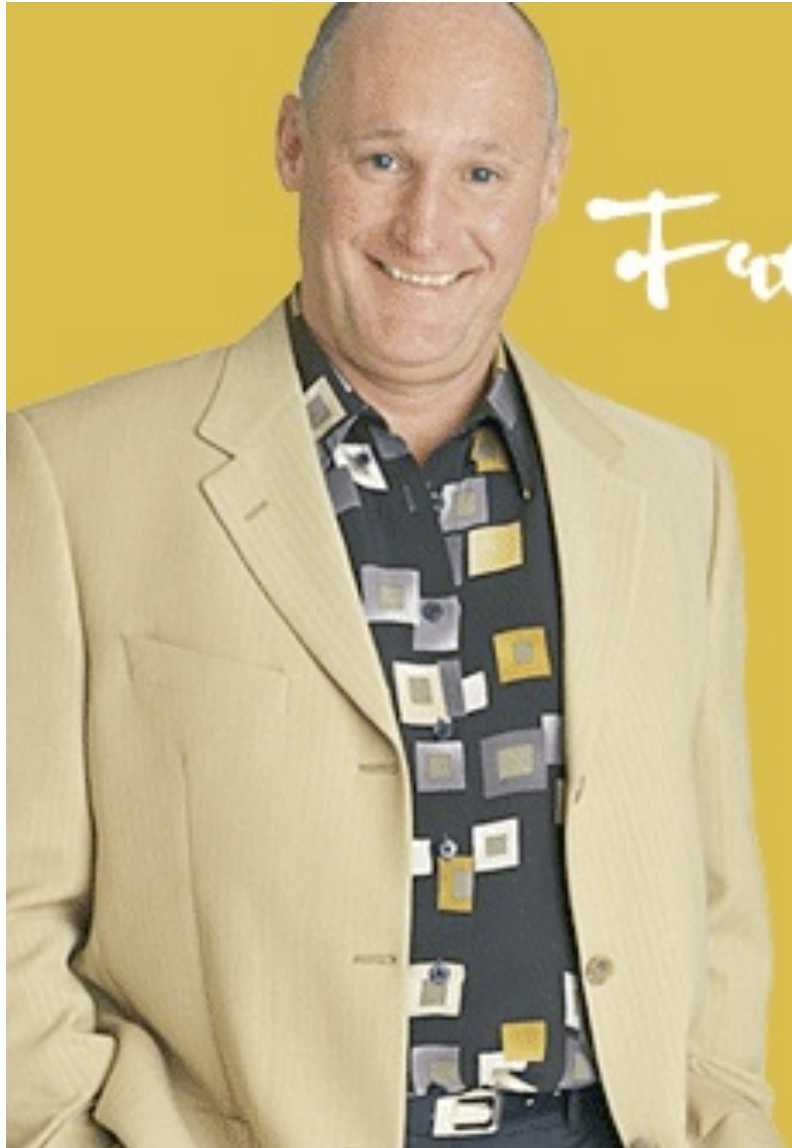
(Click on item for nutritional info)

# Consumer Reaction?

- A customer at the store cheerfully assured him she wasn't worried about the food at Sheetz
- She gets diarrhea from her own cooking all the time

# Partnership for Food Safety Education -- July 20, 2004

- “In light of recent news related to salmonella and potential produce contamination...”
- ”...In all cases, the first line of defense to reduce risk of contracting foodborne illness is to cook, clean, chill and separate,”



“Everybody's getting too  
anal about it --  
I mean, come on now, we're  
dealing with living fruits and  
vegetables”

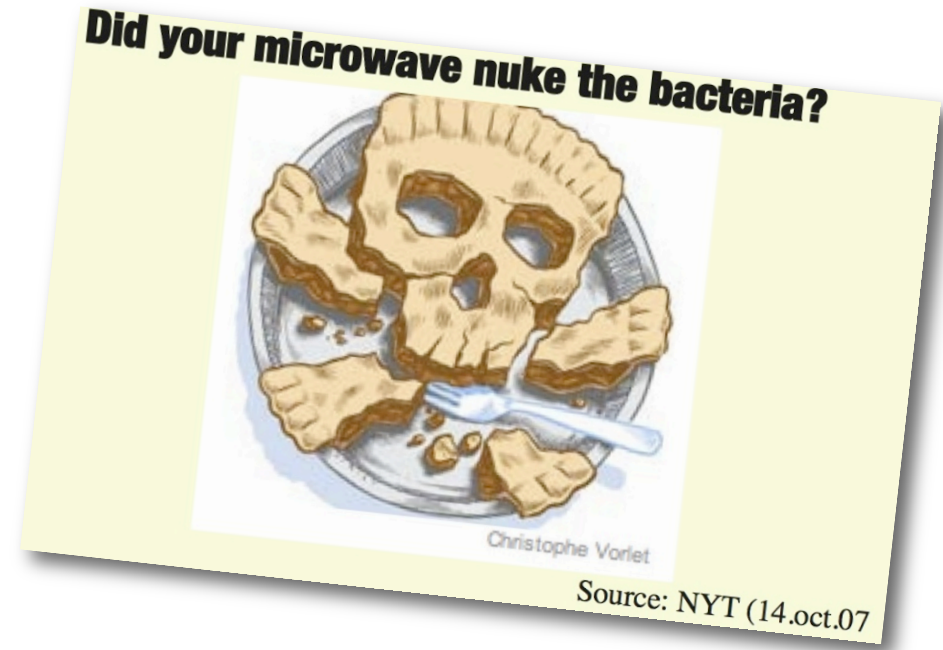
# Salmonella Banquet pot pies, 2007

- Oct. 9 2007, warned of Salmonella contamination of single serving Banquet brand, and generic store brand, frozen pot pies produced by ConAgra Foods
- ConAgra said pot pies were safe if consumers followed cooking directions
- Oct. 10/07, 11 am, [barfblog.com](http://barfblog.com) post showing poor quality of microwave instructions <http://barfblog.foodsafety.ksu.edu/blog/137867/07/10/10/cooking-frozen-pot-pie-microwave>



# Salmonella Banquet pot pies, 2007

- pot pies did not reach an internal temperature sufficient to ensure microbial food safety
- Oct. 11/07, ConAgra announces voluntary recall of frozen pot pies
- Oct. 14/07, N.Y. Times article highlighting barfblog pot pie experiment
- 401 illnesses in 41 states eventually connected to the outbreak; 32% hospitalized



# Peanut Corporation of America, 2009

- PCA supplied peanuts, peanut butter, peanut meal and peanut paste to food processors for use in cookies, snacks, ice cream and dog treats; to institutions such as hospitals, schools and nursing homes; and directly to consumers through discount retail outlets such as dollar stores
- Salmonella serotype Typhimurium outbreak sickened 691 people and killed 9 in 46 U.S. states and Canada
- over 3,900 peanut butter and other peanut-containing products from more than 350 companies recalled

# Food safety culture at PCA

- former buyer recalled a filthy plant with a leaky roof and windows that were left open, allowing birds into the building
- company purchased only low quality, inexpensive peanuts and paid food handlers the minimum wage lawfully allowed
- FDA report identified instances in which product was retested until a *Salmoella*-negative result was achieved
- PCA also shipped product to customers despite positive test or before the test result was



# Food safety culture at PCA

- inadequate controls to prevent contamination and insufficient cleaning and sanitation
- handwashing facilities sucked
- roasting temperature and belt speed had not been evaluated to ensure that the roasting step was sufficient to kill bacteria
- raw and roasted peanuts stored directly next to one another, allowing for potential contamination of the roasted finished product.
- PCA maintained the highest possible rating from AIB International



# Would you buy from this business?



- Not sure of risks associated with their product
- Ingredient manufacturer
- Reportedly knowingly shipped contaminated products
- Received superior audit rating

# Kellogg's

- Kellogg's hotline (800-962-1413) says: "If you would like to share comments regarding our relationship with Michael Phelps, please press 1...If you are calling about the recent peanut butter recall, please press 2."



# Fat Duck norovirus, England, 2009

- run by celebrity chef and molecular gastrologist Heston Blumenthal
- voluntarily closed restaurant in Feb. 2009
- originally said it wasn't food, but an airborne virus
- UK Health Protection Agency reported in Sept. 2009, 529 patrons ill with norovirus in January and February 2009
- source was probably contaminated shellfish, including oysters that were served raw and razor clams that may not have been appropriately handled or cooked.



# Fat Duck norovirus, England, 2009

- Fat Duck had delayed response to the incident, use of inappropriate environmental cleaning products, and staff working when ill; up to 16 of the restaurant's food handlers were reportedly working with norovirus symptoms before it was voluntarily closed
- *"I'm appalled because I was so entranced by Heston Blumenthal and he comes across as being very decent and clever. We had been so ill and, at the very least, we expected some kind of acknowledgment. We really thought they would be interested in what had happened to us"* (Freeman, 2009)
- Blumenthal apologized in Sept. 2009, but continued to blame others



# Salmonella in DeCoster eggs, Iowa, 2010

- 1,608 confirmed cases of Salmonella linked to DeCoster eggs
- 550 million eggs recalled
- live mice were found inside laying houses at four sites, and numerous live and dead flies were observed in egg-laying houses at three locations
- chicken manure accumulated 4 -8 feet high underneath the cages at two locations, pushing out access doors, allowing open access for wildlife and other farm animals
- uncaged birds were using tall manure piles to access egg-laying areas



# Salmonella in DeCoster eggs, Iowa, 2010

- inspectors saw employees not changing or not wearing protective clothing when moving from laying house to laying house
- three Hillandale Farms locations contained unsealed rodent holes with evidence of live rodents at one of the facilities, with gaps in walls and doors at other sites
- uncaged chickens were observed tracking manure into the caged hen areas
- AIB gave DeCoster egg operations “superior” rating and “recognition of achievement” in June 2010
- *“The contributions of third-party audits to food safety is the same as the contribution of mail-order diploma mills to education”*  
(Mansour Samadpour)

# What is safe food?



# Food that doesn't make you barf





# John Tudor & Son, Wales, 2005

- 157 school children sickened by E. coli O157:H7 in cooked meats in school lunches
- 31 hospitalized, 1 death
- packaging machine used by Tudor for both raw and cooked meats probable source of contamination



# Pennington inquiry

- Tudor had significant disregard for food safety
- serious, repeated breaches of federal food safety regulations
- failures in cleaning and separation of raw and cooked meats
- falsified records
- HACCP plan poorly designed, inaccurate and misleading
- no food safety culture, money trumped safety





“Anyone who tries to distinguish  
entertainment from education doesn't  
know the first thing about either”

Marshall McLuhan

# Foodborne illness in the US



- 48 million cases of foodborne illness
- 55,961 hospitalizations
- 1,351 deaths

# WHO factors contributing to foodborne illness

- Improper cooking procedures
- Temperature abuse during storage
- Lack of hygiene and sanitation by food handlers
- Cross-contamination between raw and ready-to-eat foods
- Foods from unsafe sources
  - All human factors, behavior based
  - WHO, 2002









These signs are up all over the labor & delivery wing.  
Should I be worried that they've made this my responsibility?





<http://www.hi-tm.com/Documents/Bloody-chik.html>



<http://barfblog.foodsafety.ksu.edu/2007/10/articles/culture-of-food-safety/its-undercooked-or-is-it/>



stick it in



# Jessica Simpson who?

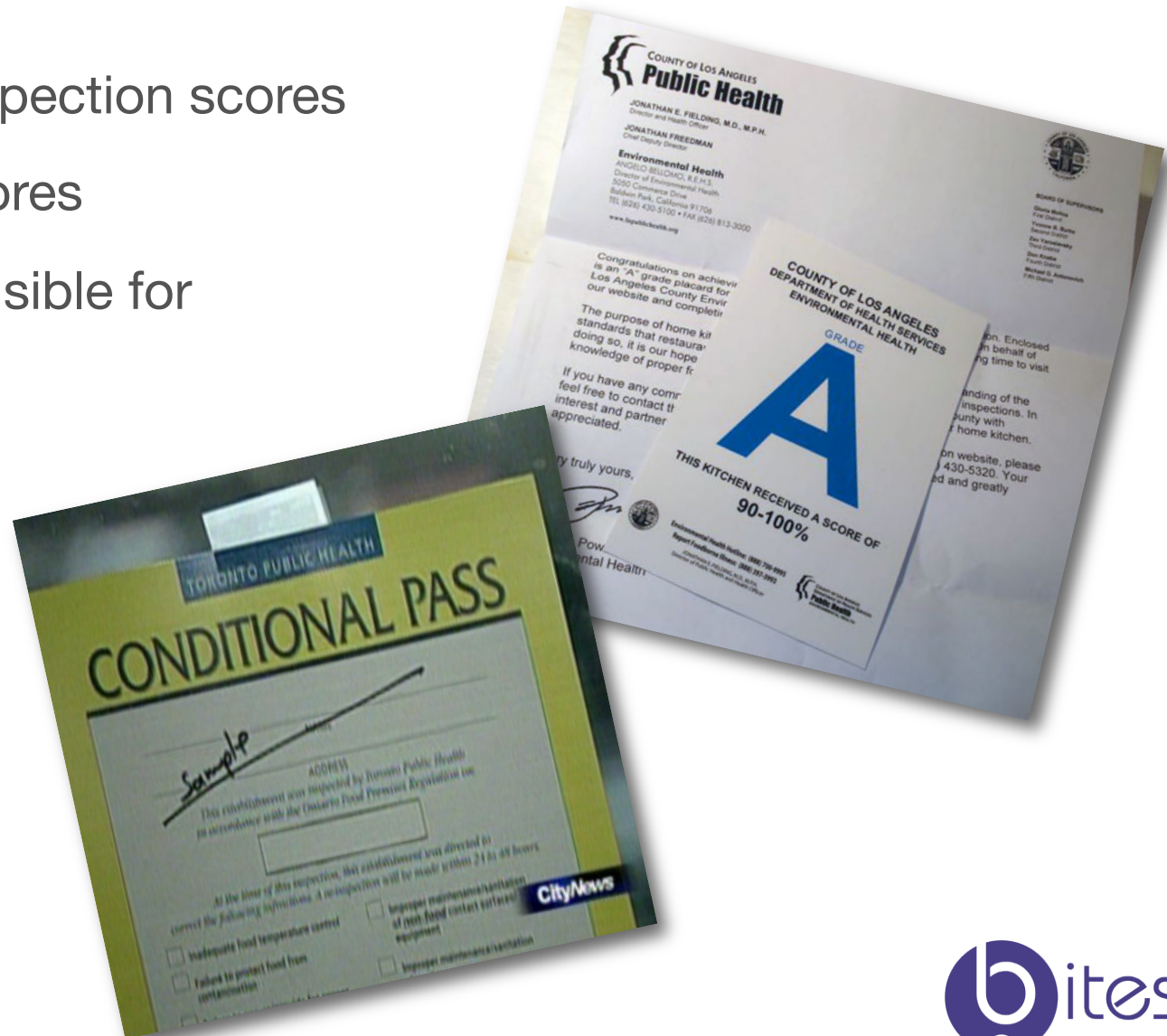


# Safer food with smiley faces – Danish Food Safety Authorities



# Incentives and motivation

- Bonuses based on inspection scores
- Posting inspection scores
- Food handlers' responsible for actions via fines





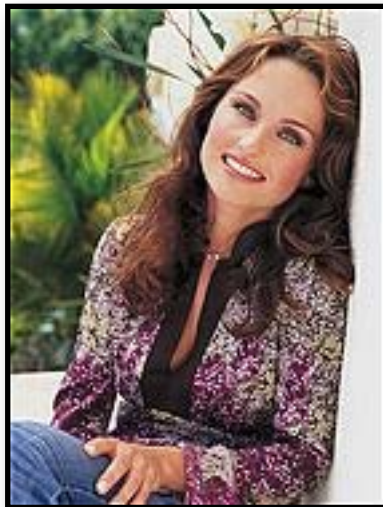
# Food safety stories can improve safety of restaurant meals

- Use of food safety infosheets in the back kitchens of restaurants can help reduce dangerous food safety practices and create a workplace culture that values safe food
- Video observation in eight commercial restaurant kitchens validates that infosheets work
- Cross-contamination events decreased by 20% and handwashing attempts increased by 7% after introduction of infosheets





# Spot the mistake – celebrity chefs





“The first rule of public health is one most of us learn in kindergarten:  
Don't eat poop”

- – Foodborne bacteria evolving, becoming more dangerous
  - 10.oct.06
- USA Today | Elizabeth Weise

# Challenge: Many different pathogens and toxins

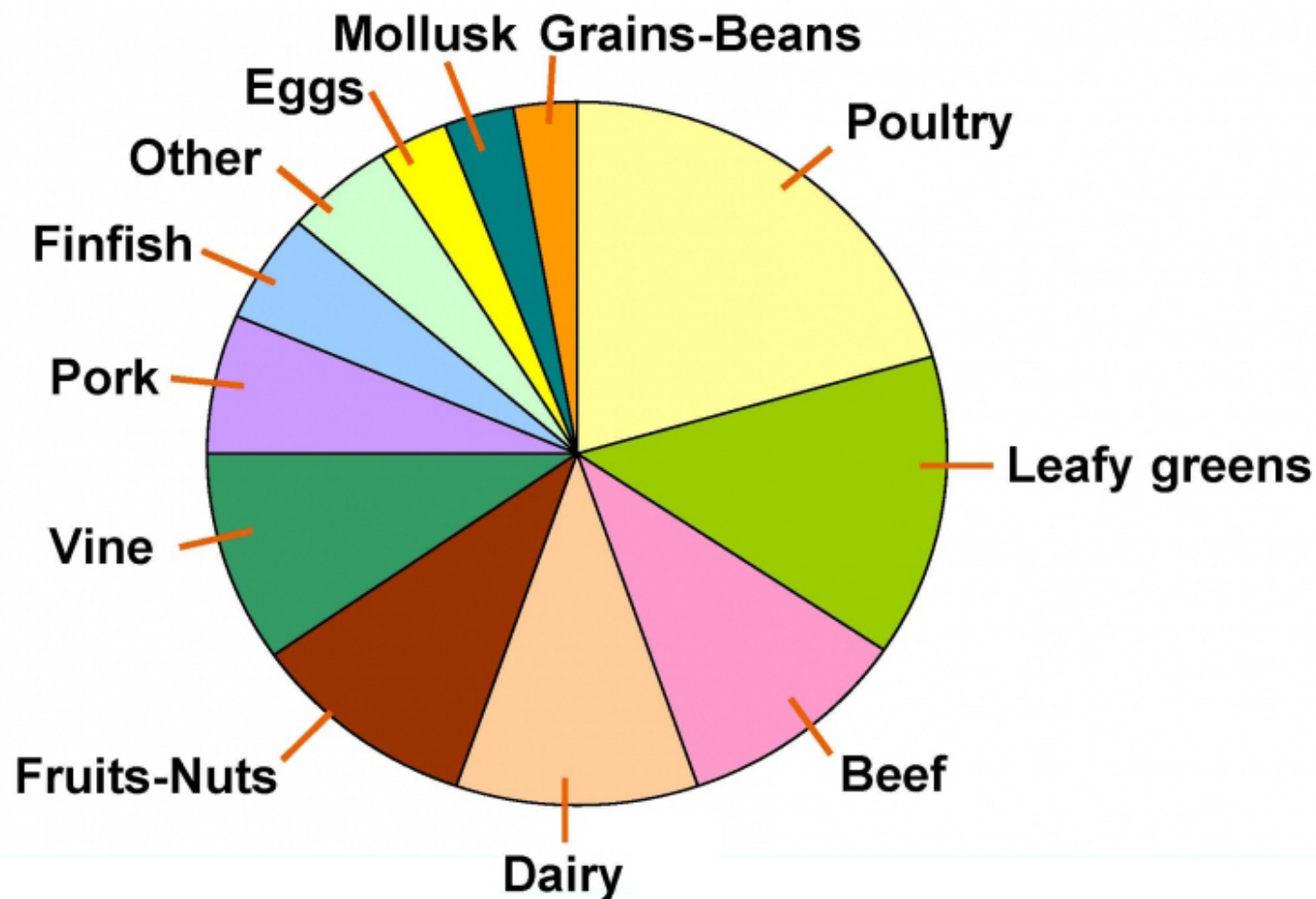
- More than 250 pathogens and toxins transmitted by food
- More pathogens continue to be identified
- Many pathogens also spread through water, direct animal or human contact
- The 6 most important pathogens are:

Estimates of Annual Food-Related		
	Illnesses	Deaths
<i>Listeria</i>	2,500	500
<i>E. coli</i> O157:H7 et alia*	93,000	75
<i>Toxoplasma</i>	1,125,000	275
<i>Salmonella</i>	1,350,000	550
<i>Campylobacter</i>	1,900,000	100
Norovirus	9,200,000	124

\*And other Shiga toxin-producing *E. coli*

# Challenge: A broad range of foods can be contaminated

- Prevention often focuses on specific foods
- 2003-2007: Illnesses in 1,355 outbreaks caused by single food



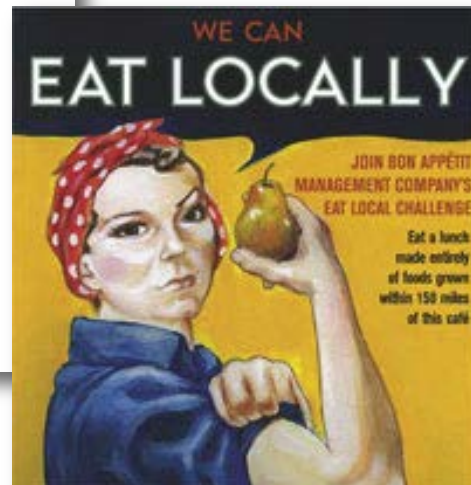
# Challenge: A broad range of foods can be contaminated

- 10 new food vehicles identified in multi-state outbreaks since 2006
- Bagged spinach
- Carrot juice
- Peanut butter
- Broccoli powder on a snack food
- Dog food
- Pot pies
- Canned chili sauce
- Hot peppers
- White pepper
- Raw cookie dough



# Eat Local: Movement stresses safety

- "Buying locally is much safer than just eating food that has been purchased en masse from god knows where."



# Farmers markets and local foods



- Carnivore, herbivore, omnivore, locovore
- All at risk for foodborne illness
- Bacteria are blind to source, they don't care whether the product they live in is sold at a retail store or farmers market

**HONEST TO  
GOODNESS  
DOWN-TO-EARTH  
FARM-FRESH  
FRESHLY-PICKED  
HOME-GROWN  
HAND-MADE  
COUNTRY-KITCHEN  
COTTAGE-INDUSTRY  
GOOD OLD-FASHIONED**

**HONEST  
SALT-OF-THE-EARTH  
FAT-OF-THE-LAND**

**FRESH  
WHOLE NATURAL  
FOODS - SOURCED  
STRAIGHT FROM  
LOCAL**

**FARMS-JUST CAUGHT  
DIRECT TO YOU  
EVERY DAY  
VALUE**

**EVERY WEEKEND  
COME RAIN OR SHINE!  
100% FRESH  
100% LOCAL  
100% OZ MADE**



**Jan Power's  
Farmers Markets  
Events**



#### LETTUCE

Canada, Chile, Dominican Republic, Mexico, Peru, USA



#### CUCUMBERS

Canada, Honduras, India, Mexico, Spain, USA



#### FETA CHEESE

Canada, Denmark, Egypt, Germany, Greece, Israel, Italy, Turkey, UK, USA



#### VINAIGRETTE

Argentina, Brazil, Canada, Chile, China, France, Germany, Greece, India, Indonesia, Italy, Mexico, Morocco, Peru, Portugal, Spain, Thailand, Tunisia, Turkey, USA, Vietnam



#### OLIVES

Greece, Israel, Mexico, Spain, USA



#### SPROUTS

Argentina, Australia, Bangladesh, Canada, China, Egypt, France, India, Morocco, Nepal, Pakistan, South Africa, Spain, Turkey, USA



#### CROUTONS

Argentina, Australia, Brazil, Canada, China, France, India, Mexico, Netherlands, Poland, Russia, Switzerland, Uruguay, USA, Vietnam



#### TOMATOES

Canada, Dominican Republic, Holland, Israel, Italy, Mexico, USA



#### ONIONS

Canada, China, Germany, India, USA



#### MANDARIN ORANGES

Israel, Mexico, Morocco, South Africa, Spain



## The Well-Traveled Salad. Do You Know Where Your Food Has Been?

As consumers, many of us fail to recognize that even our domestic and local food supplies are part of a global network. The daily activity of consuming food directly links our health as humans to the health of crops and produce, food animals, and the environments in which they are produced.

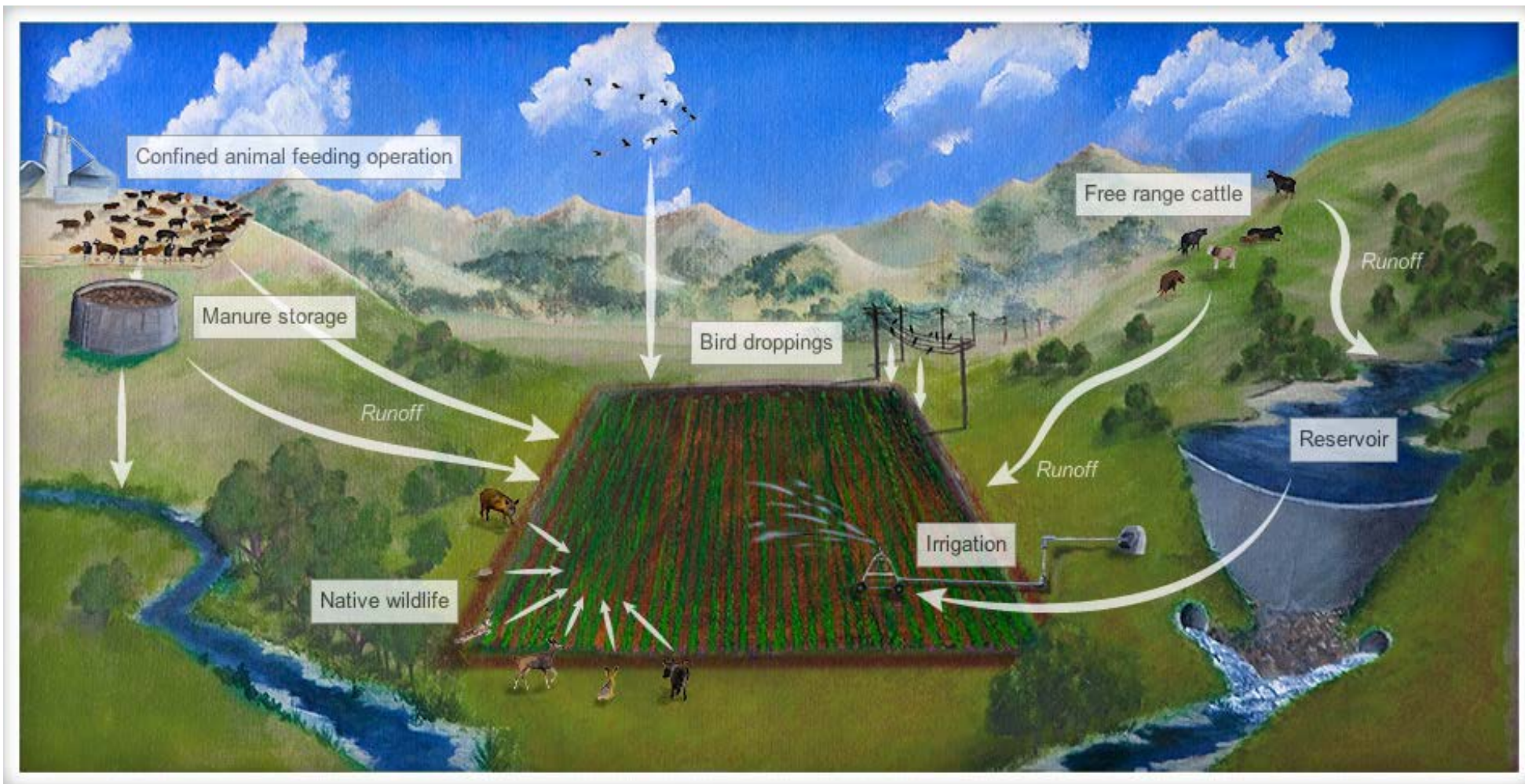
A "One Health" approach to food safety—bringing together expertise and resources from the clinical, veterinary, wildlife health, and ecology communities—has the potential to reveal the sources, pathways, and factors driving the outbreaks of foodborne illness and possibly prevent them from occurring in the first place.

NOTE: Countries are listed in alphabetical order and not by volume of export.



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[www.iom.edu](http://www.iom.edu)



Credit: Adam Cole and Alyson Hurt / NPR



# Is porn industry more responsible than food industry?

- California's multibillion-dollar adult entertainment industry halted production after an actor tested positive for HIV
- food industry blames the consumer
  - cook pot pies
  - cook hamburger
  - cook eggs
- equivalent would be porn industry saying, use a condom





# **Sprouts - a Special Problem**

## NACMCF Produce White Paper 1998



# Sprout Outbreaks 1996 - 2004

		Alfalfa	Clover	Mung Bean	Cases
1996	(2)	1	1		650
1997	(3)	3	1		277
1998	(3)	3	1		48
1999	(6)	5	2		389
2000	(1)	-	-	1	75
2001	(3)	1		2	88
2002	(2)	1		1	21
	(5)	5			52
	(2)	2			33

# NACMCF Sprout White Paper

- **Seeds are the most likely source of microbial contamination.**
- **Damaged or scarified seed may increase the risk of internalization of pathogens and make disinfection more difficult.**
- **5-log seed disinfection treatment should be applied to seed before sprouting**

# FDA's Sprout Guidance

## October 25, 1999



**<http://vm.cfsan.fda.gov/~dms/sprougd1.html>**

**<http://vm.cfsan.fda.gov/~dms/sprougd2.html>**

# Sprout-related outbreaks

<http://bites.ksu.edu/sprouts-associated-outbreaks>

Feb. 2012	<i>E. coli</i> O26	29	Raw clover sprouts at Jimmy John's restaurants is the likely cause of this outbreak
May-Jul. 2011	<i>E. coli</i> O104:H4	4,321 (50 deaths and 852 HUS cases)	Bean sprouts
2009	<i>Salmonella</i> Saintpaul	235	Raw alfalfa sprouts
2005	<i>Salmonella</i> spp.	648	Mung sprouts

# *E. coli* O104:H4 in Germany

- 53 deaths
- 4,321 illnesses
- 852 cases of HUS
- would auditors have noted seed source as potential risk
- would auditors say, don't serve sprouts



- Alfalfa sprouts grown in Illinois sickened at least 140 people in 23 states with salmonella beginning Nov. 2010, and many of those sick ate the sprouts on Jimmy John's sandwiches
- On Jan. 3, 2011, in a separate outbreak, health officials fingered clover sprouts produced by Sprouters Northwest, Inc. of Kent, Wash. as the source of a salmonella outbreak that sickened three in Oregon and four in Washington; the vehicle in at least some of the illnesses was Jimmy John's sandwiches with sprouts.
- In mid-Jan. 2011, John Liautaud, the owner of the Jimmy John's sandwich shop chain, said his restaurants will be replacing alfalfa sprouts with allegedly easier-cleaned clover sprouts, effective immediately.



- U.S. Food and Drug Administration inspected the Sprouter's Northwest facility and found:
  - Failure to take necessary precautions to protect against contamination of food and food contact surfaces with microorganisms and foreign substances;
  - Failure to clean food-contact surfaces as frequently as necessary to protect against contamination of food;
  - Failure to clean non-food-contact surfaces of equipment as frequently as necessary to protect against contamination;
  - Effective measures not being taken to protect against contamination of food on the premises by pests;

- Failure to properly store equipment, remove litter and waste, and cut weeds or grass that may constitute an attractant, breeding place or harborage area for pests, within the immediate vicinity of the plant, building, or structures;
- Failure to maintain buildings, fixtures, or other physical structures in a sanitary condition;
- Failure to hold raw materials in bulk or suitable containers so as to protect against contamination; and,
- Failure to maintain buildings and physical facilities in repair sufficient to prevent food from becoming adulterated.



The original table of North American raw sprout-related outbreaks is available at <http://bites.ksu.edu/sprout-associated-outbreaks-north-america>.

# Sprouts in Emirates lounge

- Were suppliers questioned?
- Is source of seeds known?
- Do auditors recommend not serving raw sprouts?
- Table of sprout-related outbreaks <http://bites.ksu.edu/sprouts-associated-outbreaks>



# Would you eat here?

- customer complains a sandwich chain no longer serves sprouts
- employee finds [barfblog.com](http://barfblog.com) looking for answers, reads about handwashing
- notices co-workers rarely wash hands
- employee training, corporate manual have nothing on handwashing



# Would you eat here?

- corporate auditor recently removed handwashing sign provided by state because it was visible to customers and not approved by corporate
- employees work in gloves, rarely changing or washing hands
- lettuce, tomatoes, mayo, deli meat left sitting on non-refrigerated cutting board portion of cold table where all customer food is prepared for up to an hour
- employee bugged supervisor, had staff meeting, brought to attention of corporate



# Sprout-related outbreaks

<http://bites.ksu.edu/sprouts-associated-outbreaks>



# Lessons learned?

- Food safety begins on the farm
- Biological systems, not conspiracies
- Systems are only as good as the weakest link
- Stop blaming consumers

# Third-party audits

“The contributions of third-party audits to food safety is the same as the contribution of mail-order diploma mills to education. ... I have not seen a single company that has had an outbreak or recall that didn't have a series of audits with really high scores.”

– *Mansour Samadpour, president, IEH Laboratories, Seattle*

# Third-party audits

“No one should rely on third-party audits to ensure food safety.”


– Will Daniels, food safety, Earthbound Farm

*“There is no scientific basis for certification/validation in audits” and audits often are not “transparent enough for the scientific community to survey and critically analyze what they are actually measuring”*

– Robert Buchanan, director of the Center for Food Systems Safety & Security at the University of Maryland

# Improving audits and inspection

- More companies evaluating risks of suppliers themselves
- More companies evaluating own practices internally, at arms length
- An auditor industry that polices itself better
- Auditors with better risk identification
- Companies using audit results
- Adopting new technologies such as social media, infosheets, video observation
- Combat indifference

The background of the slide is a photograph of a bright sun shining over a blue sky with wispy clouds. The sun is positioned on the left side, creating a lens flare effect. The sky is a deep blue, and the clouds are light and wispy.

# The Alternative to HACCP: Faith-Based Food Safety

*“We’ve always done it this way and we’ve never hurt anyone before...”*

# Big ag bad anything else good

- rBGH in milk -- we're drinking what?
- eggs with a side of salmonella
- drug store in your meat
- free antibiotics in food and water
- meat inspection by have a cup of coffee and pray method
- foie gras a delicacy from hell
- extreme growth promoters
- mad cow disease--it's baaaaaack
- brave new clones



# Beef Products International

- founded 1981
- submitted process in 2002 to remove protein from fat after cattle slaughter and inject with puff of ammonia
- USDA scientists raise objections internally in 2002, calling the product pink slime
- pink slime highlighted in Pulitzer-Prize winning N.Y. Times story about *E. coli* O157:H7



# Beef Products International

- BPI vows more transparency, begins testing for big-six non-O157 STECS
- Jamie Oliver creates pink slime yuck factor, April 2011
- McDonald's and others stop using beef with pink slime Dec. 2011



# Pink slime recycled

- March 7, 2012: ABC New reveals pink slime was coined in 2002 memo by USDA scientists Gerald Zirnstein and Carl Custer
- Pink slime is fat heated at low temperature; excess fat spun out
- It may be safe but it's not beef



# Industry, others respond

March 8, 2012:

- it's pink so it's meat
- change the language
- not good enough for fast food but good enough for school lunch program; on-line petition launched
- BPI: it's meat, consumers don't need to be informed, gross misunderstanding; blames media; we'll educate public
- USDA: it's safe, but schools will have choice (does this apply to GE ingredients?)
- more retailers bail on pink slime



# 'It's pink, it's meat,' lean finely textured beef

- boneless lean beef trimmings (BLBT)
- lean finely textured beef (LFTB)
- finely textured beef (FTB)
- changing a name is the wrong focus



# Risk messages

- BPI full-page ad, Wall Street Journal, endorsement by Safe Tables Our Priority
- Iowa Gov. Terry Branstad announces he has formed a coalition of governors to fight the “baseless media scare.”
- Governors of Texas, Kansas, Nebraska, along with Iowa hold a media show-and-tell at BPI plant



# Risk messages

- Dude, it's beef
- Stores, restaurants, packaged food companies exploit media moment, say they've never used pink slime (Wendy's, WholeFoods, Costco, A&P, Publix)

# Lessons of pink slime

- don't fudge facts (not really 100% beef)
- facts are never enough
- changing the language is bad strategy (rBST, GE foods)
- telling people they need to be educated is arrogant, invalidates and trivializes people's thoughts
- don't blame media for your lousy communications
- WSJ not representative of hamburger eaters; target social media



# Lessons of pink slime

- any farm, processor, retailer or restaurant can be held accountable for food production – and increasingly so with smartphones, facebook and new toys
- real or just an accusation, consumers will rightly react based on the information available
- Amplification of messages through media is nothing new, especially if those messages support a pre-existing world-view
- food is political but should be informed by data
- data should be public

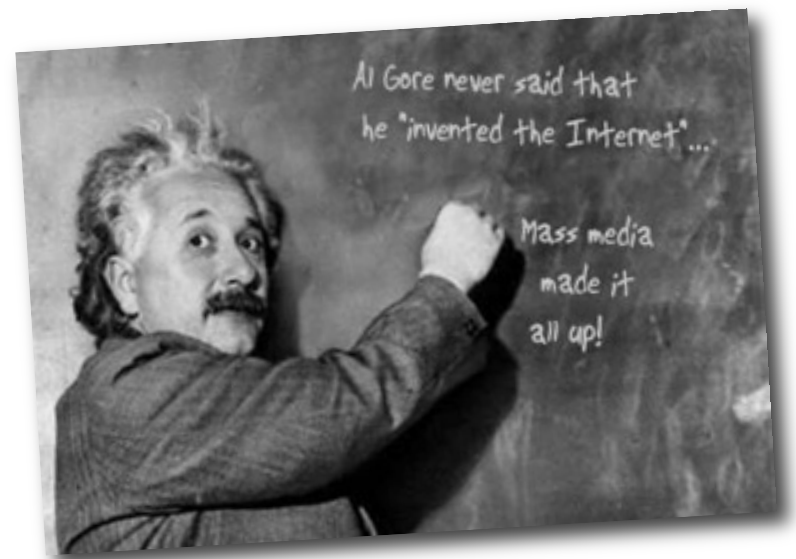
# Lessons of pink slime

- paucity of data about pink slime that is publicly available, statements like it's safe, or it's gross, are difficult to quantify
- relying on government validation builds suspicion rather than trust; if BPI has the safety data, make it public
- there will be more pink slimes; the same self-proclaimed environmental activists have already taken ownership of pink slime as a catchphrase for things hidden



# Lessons of pink slime

- what does right-to-know really mean? Do you want to say no?
- if so, have public policy on how information is made public and why?
- choice is a fundamental value
- what's the best way to enable choice, for those who don't want to eat pink slime or for those who care more about whether a food will make their kids barf?



# Lessons of pink slime

- proactive more than reactive; need both, but any food provider should proudly proclaim – brag – about everything they do to enhance food safety.
- perceived food safety is routinely marketed at retail; instead market real food safety
- market food safety at retail so consumers actually have a choice and hold producers and processors – conventional, organic or otherwise – to a standard of honesty.

# Lessons of pink slime

- if restaurant inspection results can be displayed on a placard via a QR code read by smartphones when someone goes out for a meal, why not at the grocery store or school lunch?
- link to web sites detailing how the food was produced, processed and safely handled, or whatever becomes the next theatrical production – or be held hostage



# Maple Leaf Foods, Canada 2008

- *Listeria monocytogenes*-contaminated deli meats caused 57 illnesses and 23 deaths
- contamination source was commercial meat slicers that had meat residue trapped deep inside the slicing mechanisms
- textbook risk communication, lousy risk management
- delay in warning the public



# Maple Leaf listeria review

- focus on food safety was insufficient among senior management at company and government
- insufficient planning for a potential outbreak;
- those involved lacked a sense of urgency at the outset of the outbreak
- Weatherill (2009) specifically identified the need for cultures of food safety at food processing companies, calling for "actions, not words"



# Maple Leaf – try harder

- provide a chronological accounting of the outbreak (who knew what when)
- add warning labels to packages of ready-to-eat meats for persons at high risk for listeriosis
- release details of product and environmental testing results, perhaps through the establishment of a website that provided *Listeria* spp. testing data in real time





# Really big nosestretcher alert:

## Leading Toronto hospital says cold cuts, raw fish, OK for expectant mothers

- According to the (incorrect) Canadian Family Physician's statement: *"pregnant women need not avoid soft-ripened cheeses or deli meats, so long as they are consumed in moderation and obtained from reputable stores."*
- Deli meats or cold-cuts top the list of foods to avoid while pregnant
- Nearly 60 per cent of pregnant women diagnosed with listeriosis either miscarry or have stillbirths
- The CDC has estimated approximately 2,500 cases of listeriosis occur annually in the U.S., with about 500 cases resulting in death



# Really big nosestretcher alert:

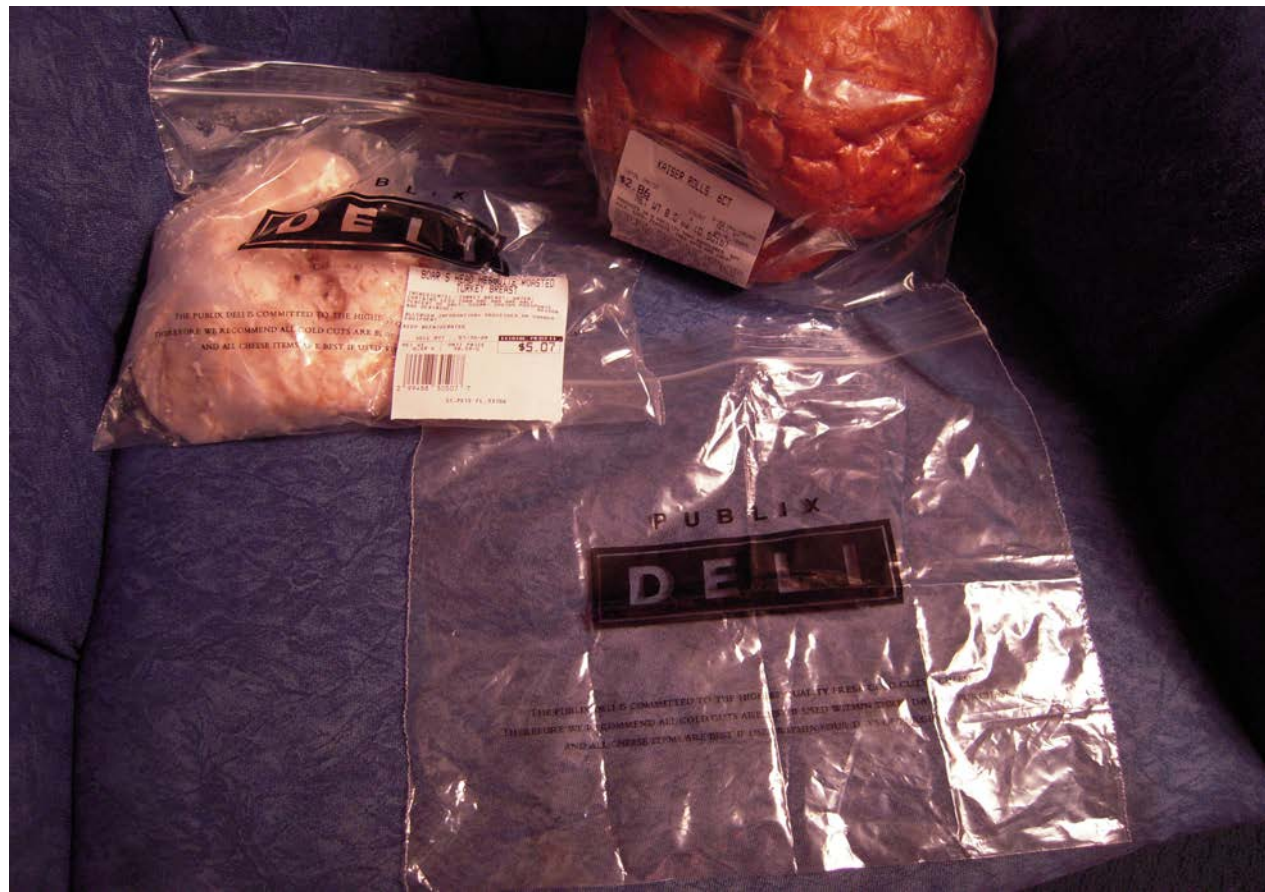
## Leading Toronto hospital says cold cuts, raw fish, OK for expectant mothers

- The information provided to pregnant women by health care providers needs to be targeted and clear
- The CDC has estimated approximately 2,500 cases of listeriosis occur annually in the U.S., with about 500 cases resulting in death
- In 2000, listeria exposure resulted in a higher rate of hospitalization than any other foodborne pathogen and more than one-third of reported deaths from food pathogens

*“The Publix Deli is committed to the highest quality fresh cold cuts & cheeses*

*Therefore we recommend all cold cuts are best if used within three days of purchase*

*And all cheese items are best if used within four days of purchase”*



# Messages in 140 characters

- CDC director of the National Center for Health Marketing, Dr. Jay Bernhardt, explained that the effectiveness of the agency's communications through social media is dependent upon public trust, which is developed by speaking the audience's language

Berhardt said of the CDC's Tweets, "The social media team has learned to use a lot of exclamation points in these kinds of things"

# Modern mothers



- Mommy Bloggers – women who have at least one child in their household and have read or contributed to a blog in the past 30 days
- Average age of Mommy Bloggers – 37
- 4,500 Mommy Bloggers take blogging seriously enough that they might fly to a blogger conference
- 14% of all American moms are Mommy Bloggers
- Number of Mommy Blogs in North America – 3,900,000

# Most hits on a blog post?

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**Is free soft-serve ice cream for pregnant women a good idea?**

POSTED ON MAY 20, 2008 BY DOUG POWELL

**Baskin Robbins** is offering free soft serve ice cream to expectant mothers on May 21, 2008, in California, Chicago, New York, Nashville, and El Paso, Texas. It's apparently the beginning of a national roll-out of soft serve ice cream at Baskin Robbins.

I have no idea why they targeted expectant moms, or why they recruited a pregnant **Tori Spelling** as spokesthingy.

**Andrew Reece** and I did some quickie research and found the **Australians**, in particular, may have a problem with this promo.

Soft serve ice cream is on the Australian list of foods pregnant women should avoid. Sanitation with the equipment appears to be an on-going problem.

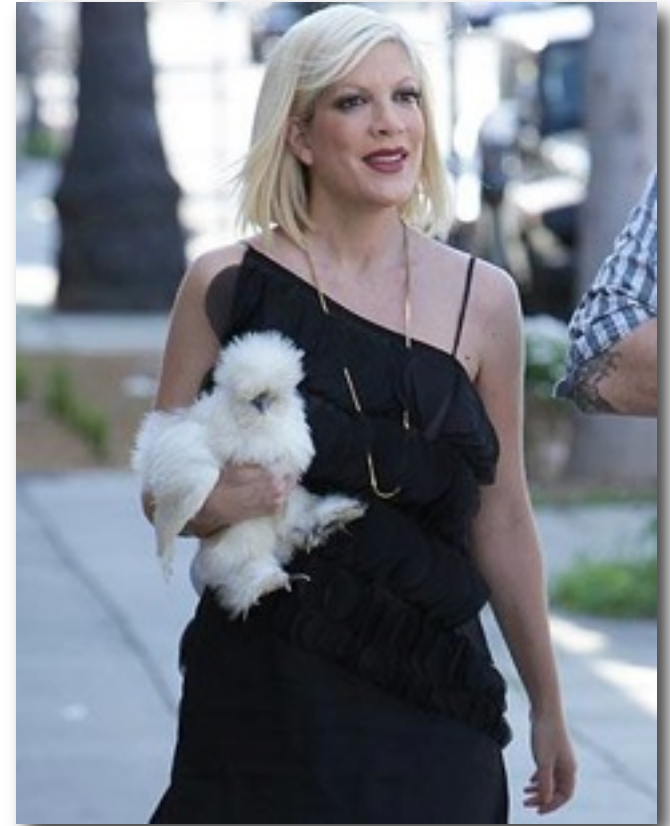
A **1996 study in Sydney, Australia** found 49 of 86 samples of soft serve to have dangerous bacteria levels. Another study in **Wisconsin** in 2003, found 15 of 22 local soft serve machines at retail food service establishments to have dangerous levels of coliforms and other bacteria. In 2006, Iowa also found a high level of soft serve machines (23%) in the **Waterloo-Cedar Falls area** to have dangerous levels of coliforms and other bacteria. Regular cleaning of machines with soap and sanitizer could reduce the number of bacteria found on the soft serve machines.



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# Modern mothers

- \$84,000 average annual household income for Mommy Bloggers – that's \$14,000 higher than non-blogging moms
- 52% likelihood of Mommy Bloggers over other mothers to have completed a college or post-graduate education



# Top 10 Mom Bloggers

**Rebecca Woolf** | *Girl's Gone Child*

**Jenny Lawson** | *The Bloggess*

**Catherine Connors** | *Her Bad Mother*

**Heather B. Armstrong** | *Dooce*

**Alice Bradley** | *Finslippy*

**Katherine Stone** | *Post Partum Progress*

**Monica Bielanko** | *The Girl Who*

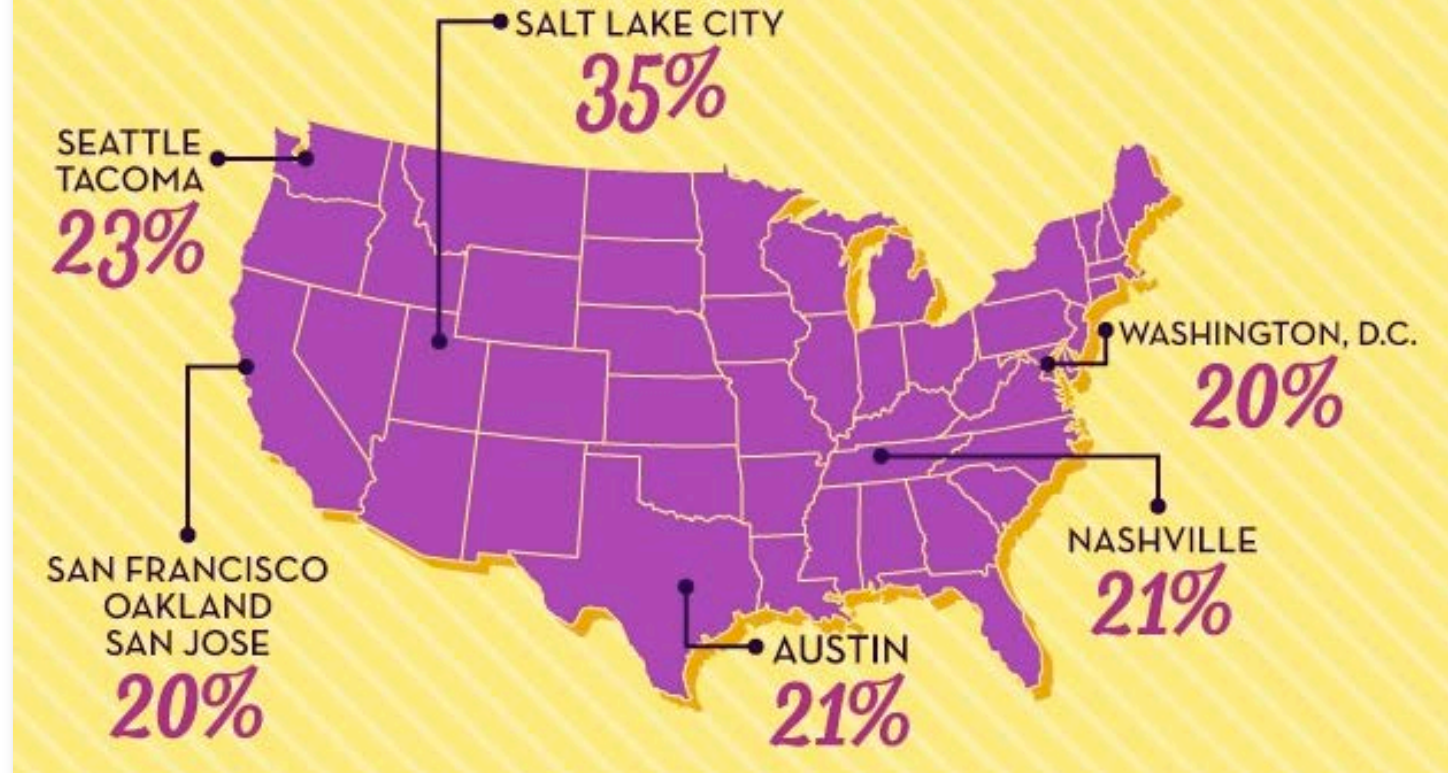
**Ree Drummond** | *The Pioneer Woman*

**Amy Corbett Storch** | *Amalah*

**Kate Inglis** | *Sweet Salty*

## TOP LOCAL MOMMY BLOGGING MARKETS

moms who have read or contributed to blogs in the past thirty days



[http://mashable.com/2012/05/08/mommy-blogger-infographic/?utm\\_source=feedburner&utm\\_medium=feed&utm\\_campaign=Feed%3A+mashable%2Fentertainment+%28Mashable+>>+Entertainment+and+Media%29](http://mashable.com/2012/05/08/mommy-blogger-infographic/?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+mashable%2Fentertainment+%28Mashable+>>+Entertainment+and+Media%29)

# How lawyers leverage Google

- Own their risk terms and keywords
- Address the blogosphere
- Engage via video
- Be where the fear is



<http://www.fastcompany.com/3001180/four-ways-plaintiffs%E2%80%99-lawyers-leverage-google-stir-food-safety-fears>

# Social Media Explained



# Should lettuce be washed?

- pre-packaged, says it's washed, no
- other, yes
- but washing does little
- greens in bins at retailers?
- what's a consumer to think?





# Food safety culture

- A set of shared values within an organization
- “Dude, wash your hands”
- A new area of study/emphasis



# Background communication



- “If you think the 10 commandments being posted in a school is going to change behavior of children, then you think “Employees Must Wash Hands” is keeping the piss out of your happy meals. It's not.”
- Source: Jon Stewart, Saturday Night Live monologue, 2002

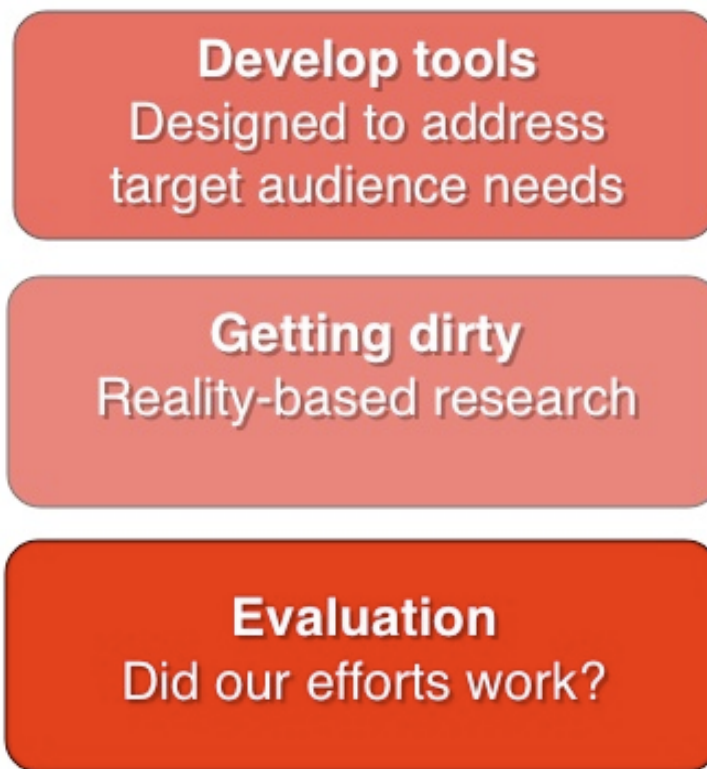
# Cultural factors influencing food safety performance

- leadership
- food safety management systems and style
- commitment to food safety
- food safety environment
- risk perception
- communication

*Griffith, Livesey & Clayton (2010)*



## A food safety culture program



Risk  
assessment  
and microbial  
modeling

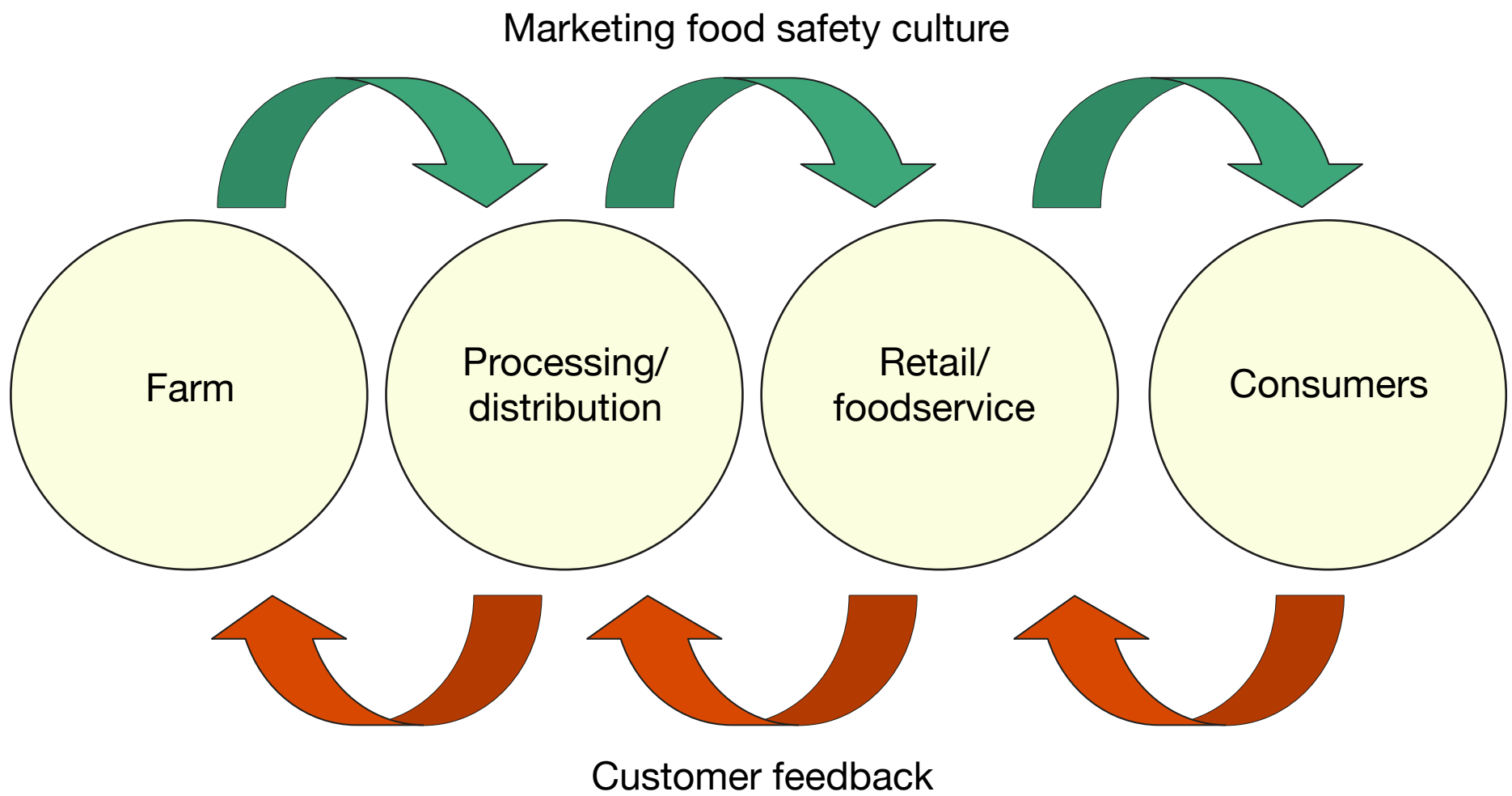
# What to do?



- Try not to make people sick
- Create a culture of food safety in your organization
- Embrace evidence-based microbiologically safe food
- Market it (and back it up)
- Be the bug

# Marketing food safety

- Source food from safe sources
- Public disclosure of food safety inspection results
- Mandatory food handler certification
- Rapid, relevant, reliable and repeated information
- Compel rather than educate



# Food safety leaders do more than follow perceptions



## Leaders create perceptions

# Information must be:

- Rapid
- Reliable
- Relevant
- Repeated

# 4 C's of Food Safety

- Complex
- Constant
- Commitment
- Compelling

