“Food Safety Case Studies Impact on the Supply Chain: Lessons Learned?”

*Tuesday, May 8, 2018 – 8:30 – 11:30 am*

Food Safety Summit, May 7-10, 2018
Donald E. Stephens Convention Center, Rosemont IL
[www.foodsafetysummit.com](http://www.foodsafetysummit.com)
Supply Chain Session Focus and Goal

1. Using a “open forum”, ALL ATTENDEES are invited to help define food safety corrective actions across the Supply Chain to minimize/prevent food safety risk to consumers.

2. Subject matter experts will share their prior experience.

3. We will explore the 2017 Fipronil Pesticide Egg Recall as well as the Salmonella contaminated Papaya Recall.
Supply Chain Open Forum Topics

1. Case study overview of key 2017 recalls
   - Dr. Craig Henry, Intro Inc.

2. Supply Chain food safety weaknesses illuminated by the recalls
   - Dr. Craig Henry, Intro Inc.

3. Foodborne illness lessons learned from the papaya recall
   - Matthew Wise, MPH, Ph.D., CDC

4. A Situation Evaluated Across the Supply Chain
   - Kathleen O’Donnell, Wegmans and Natalie Kreher, Kreher’s Fresh Eggs LLC

5. Recommended egg supply chain improvements
   - Oscar Garrison, United Egg Producers

6. Liabilities across the supply chain
   - Shawn Stevens, Food Industry Counsel
1. Fipronil in eggs and egg products
   a) Commonly used to get rid of fleas, lice and ticks from animals, fipronil is banned by the European Union from use in the food industry.
   b) Fipronil contaminated eggs detected across other parts of the world including the Middle East.
   c) July 2017 - Fipronil contamination in eggs and egg products in Europe affecting 65 products and 20 million eggs.
   d) Of the 28 EU member states, 26 reported finding fipronil in their eggs and egg products,
   e) The pesticide was also found in products in other countries like the United States, Russia, South Africa, the Dutch Antilles, Turkey, Iraq, Norway, Israel and Canada.
   f) [https://nltimes.nl/2017/09/05/fipronil-contaminated-eggs-found-45-countries](https://nltimes.nl/2017/09/05/fipronil-contaminated-eggs-found-45-countries)
2017 Recall Case study – Salmonella in Papayas

1. Salmonella in Papayas
   a) In 2011, the Centers for Disease Control and Prevention and the Food and Drug Administration investigated a Salmonella Agona outbreak that was traced to contaminated papayas imported from Mexico.
   b) July 2017, Federal officials joined Maryland’s Health Department in a warning against eating yellow Maradol papayas because of Salmonella contamination, reporting one person died and at least 46 others sickened during the outbreak that began in mid-May.
   c) August 2017, Salmonella — the pathogen behind an ongoing foodborne illness outbreak sickened 173 people across 21 states, killing one
   d) The CDC used whole genome sequencing (WGS) to obtain the DNA fingerprints of the Salmonella strains, which showed the pathogens found on the papayas from the grocery store matched those that infected the outbreak victims.
Basic Food Supply Chain

- Farm
- Processing
- Retail
- Distribution
- Consumer
Supply Chain Food Safety Weaknesses
Illuminated by Example Recalls

1. **What about Monitoring?**
   a) Must confirm trust in a food safety program through verification. Why the failures across the supply chain?

2. **What about Reporting?**
   a) Paper task completion versus action oriented tasks with confirmed desired outcomes. Was this done?

3. **What about complete Communications?**
   a) Timely communications to ALL stakeholders is a must.

4. **Why so many gaps across the Supply Chain?**
   a) On the farm?
   b) At first processing?
   c) At the laboratory?
   d) At distribution?
   e) At retail?
Supply Chain Food Safety Weaknesses Illuminated by Example Recalls

1. How or what is being done to assess predictive risk or monitor for emerging risks (leading indicator versus a lagging indicator) to stay ahead?

2. The lack of a standardized public health/food safety assessment outcomes across the global supply chain may expose/bring heightened awareness of potential hazards and risks to light.
Supply Chain Food Safety Weaknesses Illuminated by Example Recalls

3. What about Mature markets versus Emerging/source markets?
   a) A population that consumed papaya in the source country may have been exposed to this risk and suffered the consequences and may not be aware of it,
   b) Whereas the US market was able to identify the route of exposure. This makes application of effective preventive strategies at the source location behaviorally more challenging to effect “earlier warning” of foodborne pathogens.

4. Is Block Chain the “answer” for all stakeholders to “find the food safety gaps with full transparency”?
   a) Establish an electronic pedigree across ALL NODES of the supply chain for each product?
   b) Unless the risk mitigation is adequate and appropriate, Blockchain will not prevent incidents from occurring.
   c) How will risk mitigation be incorporated into Blockchain?
End-To-End Blockchain-Enabled Supply Chain (Part 1)

Blockchain

1. Supplier
   - Uploads data on antibacterial fodder
   - Chicken tagged with RFID chip; provides free range

2. Producer
   - Gets information on required cuts; prepares meat accordingly
   - Adds QR code to packaging

3. Distributor
   - Automatically receives notifications about receipt of chicken products
   - Choses best suited 3PL based on all available customer data
End-To-End Blockchain-Enabled Supply Chain (Part 2)

3PL
- 3PL (Third Party Logistics) is informed about origin and destination of the product
- Is given instructions on how to store the product

Retailer
- Runs machine learning based forecasting
- Adds updates to data records
- Provides app for final customer

Store
- Has full transparency on delivery time
- Adapts orders, promos etc accordingly

Customer
- Scans QR code via app
- Gets insights into origin of the chicken product; ageing; duration etc
Open Forum Working Session

1. **ALL Participants** – panel and audience are invited to actively engage and share their experience and knowledge on how to fix supply chain food safety weaknesses and gaps.

2. **Goals:**
   
   a) Gain agreement on where the supply chain failures “appeared” to have occurred regarding the 2 example recalls.
   
   b) Create a list of suggested remedies to minimize the probability of recurrence of such supply chain failures.
   
   c) Discuss more effective interaction between industry, regulators, scientists AND legal counsel when foodborne illnesses outbreaks arise to minimize disease and deaths.
Multistate Outbreaks of *Salmonella* Infections Linked to Imported Maradol Papayas

Matthew Wise, MPH, PhD

Outbreak Response and Prevention Branch
Division of Foodborne, Waterborne and Environmental Diseases
Centers for Disease Control and Prevention

2018 Food Safety Summit
Rosemont, IL

The findings and conclusions in this report are those of the author and do not necessarily represent the official position of the Centers for Disease Control and Prevention.
June 2017: Outbreak Detection

- CDC PulseNet identifies 13 *Salmonella* Kiambu infections with an indistinguishable PFGE pattern since May 2017

- This PFGE pattern is rare
  - Expect background of 2-4 uploads per month to PulseNet

- CDC Outbreak Response Team began coordinating a multistate investigation
July 2017: Generating Hypotheses About the Source

- High proportion of ill people report Hispanic and Asian ethnicity

- Hypothesis generating questionnaire
  - 12/24 (50%*) mango (p = 0.045 vs. 34.1%)
  - 10/24 (42%*) papaya (p = 0.002 vs. 16.1%)
  - 5/23 (22%*) sprouts (p = 0.0008 vs. 3.4%)

*A significantly higher proportion of ill people reported mango, papaya and sprouts when compared to healthy Hispanic people from the 2006 FoodNet Population Survey*
July 19, 2017: Identifying an Illness Cluster

- Several ill people report eating papayas purchased from the same grocery store location in Maryland.

- Outbreak strain of *Salmonella* Kiambu and a strain of *Salmonella* Thompson isolated from papaya samples.
  - Samples labeled Caribeña Maradol papayas from Mexico.
Baltimore, MD (July 19, 2017) – The Maryland Department of Health is warning consumers to avoid eating Caribeña's yellow, Maradol papayas because of potential contamination with Salmonella bacteria.

Yellow, Caribeña-brand Maradol papayas have been distributed to stores throughout Maryland. Consumers are encouraged to check their papayas and throw them away if they match the brand and type.

The department’s Laboratory Administration tested five yellow Maradol papayas, recently collected at a Baltimore retail location, as part of an ongoing Salmonella case investigation. Three of the five yellow papayas tested were confirmed to be contaminated with Salmonella. The source of this contamination has not yet been identified but could have occurred at any point in the supply chain. Further investigation is under way to determine the point of contamination.

Salmonella bacteria can cause diarrhea, vomiting, stomach pain and fever. Symptoms usually occur between 12 and 36 hours after exposure, but they may begin as early as 6 hours or as late as 72 hours after exposure. Symptoms can be mild or severe and commonly last for two to seven days. Anyone suspecting they are ill with a Salmonella infection should contact their healthcare provider. Salmonella can infect anyone – but young children, older adults, and people with weakened immune systems are the most likely to have severe infections.
Supply Chain Considerations

- What does Caribeña mean? Brand? Variety? Producer?
- Was the sticker on the papayas tested by Maryland accurate?
- How sure can we be that the papayas causing the outbreak are definitely from Mexico?
- How many places are papayas sourced from in the US in the summer?
July 21, 2017: First CDC Web Posting

- 47 people infected with the outbreak strain of *Salmonella* Kiambu from 12 states

- WGS showed that *Salmonella* Kiambu isolated from patients are closely related genetically
July 21, 2017: First CDC Web Posting

- “CDC recommends that consumers not eat, restaurants not serve, and retailers not sell yellow Maradol papayas until we learn more.

- If you aren’t sure if the papaya you bought is a yellow Maradol papaya, you can ask the place of purchase. Restaurants and retailers can ask their supplier.”
July 22, 2017: First FDA Web Posting

- “Consumers should not eat Caribeña brand Maradol papayas from Mexico and should throw away any such products they have in their home.

- Consumers should ask the restaurant or retailer whether they use Caribeña brand Maradol papayas and if so, avoid eating those products.”
July 26, 2017: First Recall

- Distributor G recalls certain Caribeña brand Maradol papayas
  - Grown by Farm 1 in Mexico
  - Distributed between July 10 and July 19, 2017

- Based on the available evidence, CDC updates its advice to align with FDA advice:
  - “CDC recommends that consumers not eat, restaurants not serve, and retailers not sell Maradol papayas from Mexico until we learn more.”
Investigation Expands

- CDC confirms that there are also illnesses from the *Salmonella* Thompson strain isolated from papayas by Maryland

- FDA puts papayas from Farm 1 in Mexico on an Import Alert (99-35)
  - “Detention without physical examination of fresh produce that appears to have been prepared, packed or held under insanitary conditions”

- Papayas sourced from Farm 1 are tested by FDA and yield multiple *Salmonella* serotypes:
  - Kiambu, Thompson, Agona, Senftenberg, and Gaminara
Supply Chain Considerations

- Papayas from Distributor G are unlikely to explain illnesses in all of the states.

- Were papayas from Farm 1 distributed in the US through other firms?
August 4, 2017: CDC Web Posting

- 109 people now infected from 16 states
  - *Salmonella* Kiambu (48)
  - *Salmonella* Thompson (61)
  - 46% hospitalized
  - 1 death

- WGS shows *Salmonella* Kiambu and *Salmonella* Thompson from papayas is closely related genetically to *Salmonella* from ill people
August 4, 2017: CDC Web Posting

- “CDC recommends that consumers not eat, restaurants not serve, and retailers not sell *Maradol papayas from Mexico* until we learn more.

- If you aren’t sure if the papaya you bought is a Maradol papaya from Mexico, you can ask the place of purchase. Restaurants and retailers can ask their supplier.”
August 4-7, 2017: Additional Recalls

- Distributor A announces a recall of one brand of Maradol papayas:
  - Distributed on July 16-19, 2017
  - Available to consumers until July 31

- Distributor F announces a recall of one brand of Maradol papayas:
  - Distributed in the state of Illinois from July 10-13
  - The papayas “may have been further distributed outside of Illinois”
Supply Chain Considerations

- FDA is beginning to identify the full range of firms that received papayas from the Farm 1 in Mexico.

- Can we narrow our advice to consumers, restaurants, and retailers?
August 11, 2017: CDC Web Posting

- 141 people infected with the outbreak strains from 19 states
  - *Salmonella* Kiambu (51)
  - *Salmonella* Thompson (90)

- CDC working to determine whether any illnesses with other types of *Salmonella* found in papayas are linked to this outbreak
August 11, 2017: CDC Web Posting

- "CDC recommends that consumers not eat, restaurants not serve, and retailers not sell *Maradol papayas from Farm 1 in Mexico.*"

- If you aren’t sure if the papaya you bought is a Maradol papaya from Farm 1, ask the place of purchase. Restaurants and retailers can ask their suppliers."
More *Salmonella* Strains

- CDC confirms that 11 people are infected with additional strains of *Salmonella* that were found in papayas sourced from Farm 1 in Mexico
  - *Salmonella* Agona (7) and *Salmonella* Gaminara (4) infections
  - 5/5 (100%) reported eating or possibly eating papayas in the week before becoming ill

- FDA increases testing of papayas from Mexico to see if other imported papayas are also contaminated with *Salmonella*
  - Multiple *Salmonella* serotypes identified in tested papayas including Newport, Infantis, and Urbana
Supply Chain Considerations

- Are the newly identified contaminated papayas connected to Farm 1 in Mexico in some way?
Two New Outbreaks

- FDA testing identified *Salmonella* Newport and *Salmonella* Infantis in an imported papaya sample collected from Distributor C
  - CDC identified three people who were infected with the same strains; all three people reported eating or possibly eating papayas

- FDA testing identified *Salmonella* Urbana in an imported papaya sample sourced from Farm 3 in Mexico.
  - CDC identified six people infected with the strains; 3 of 4 reported eating or possibly eating papayas
September 1, 2017: CDC Web Posting

- 201 people infected with the outbreak strains of *Salmonella* Thompson, Kiambu, Agona, and Gaminara

- CDC reports on two additional outbreaks with *Salmonella* strains found on papayas from two other farms in Mexico
  - Available information indicates these two outbreaks are not linked to papayas from Farm 1
“CDC recommends that consumers not eat, restaurants not serve, and retailers not sell Maradol papayas from:

- Farm 1
- Distributor C (Farm 2)
- Farm 3
Supply Chain Considerations

- Consumers do not know the farm their papayas come from.

- How able are retailers, restaurants, and their suppliers able to know which farms papayas were sourced from?

- We now have multiple outbreaks linked to papayas from geographically separate regions in Mexico, how do we evaluate the risk of all papayas from Mexico?
September 14, 2017: Older Outbreak Linked to Papayas

- *Salmonella* Anatum was identified by FDA in an imported papaya sample
  - From Farm 4 in Mexico
  - Distributed by Distributor B

- WGS shows the isolate from the papaya is closely related to an unsolved *Salmonella* Anatum outbreak in spring of 2017
  - Papayas had been the suspected source
September 14, 2017: 4th Papaya Outbreak Announced

- Although the outbreak investigation had been closed in the spring, the papayas that FDA tested were on the market
  - Distributor B issues a voluntary recall of papayas distributed within California during August 10 to 29, 2017

- “CDC recommends that consumers not eat, restaurants not serve, and retailers not sell recalled Maradol papayas imported by Distributor B.
  - The recalled papayas can be identified by the label on the fruit from Packing Company F.”
Supply Chain Considerations

- Are all the contaminated papayas linked to illness either out of shelf life or off the market?

- How long should we be concerned about contaminated papayas in the distribution chain and in people’s homes?
November 3, 2017: All Outbreaks Declared Over

- Illnesses in the main Kiambu/Thompson outbreak continued through October 2017

- All four outbreak investigations closed in November 2017

- “This outbreak appears to be over. This outbreak was one of four separate multistate outbreaks identified in 2017 linked to imported Maradol papayas from four different farms in Mexico.”
Outbreak of *Salmonella* Kiambu, Thompson, and other Infections

- 220 ill people from 23 states
- Linked to papayas from Farm 1 in Mexico and Distributors G, A, and F
Outbreak of *Salmonella* Newport & *Salmonella* Infantis Infections

- 4 ill people reported from 4 states
- Linked to papayas from Farm 3 in Mexico and Distributor C
Outbreak of *Salmonella* Urbana Infections

- 7 ill people have been reported from 3 states
- Linked to papayas from Farm 2 in Mexico
Outbreak of *Salmonella* Anatum Infections

- 14 illness people reported from 3 states
- Linked to papayas from Farm 4 in Mexico and Distributor B

![Graph and map showing outbreak details](image-url)
Summary/Conclusions

- Four multistate outbreaks of *Salmonella* infections were linked to Maradol papayas imported from four different farms in Mexico in 2017
  - Why did these occur at around the same time?
  - Do the smaller outbreaks happen all the time and we just found them because we were looking harder?

- Companies that sold contaminated papayas didn’t respond uniformly to the outbreak
  - Some did recalls and others did not
  - Affected what identifiable information could be shared publicly
Evolving Communications

- Public messaging rapidly evolved as more information was collected

- Do not eat, serve, or sell:
  - Yellow Maradol papayas
  - Maradol papayas from Mexico
  - Maradol papayas from Farm 1 in Mexico
  - Maradol papayas from, Farm 1, Distributor C (Farm 2), and Farm 3
  - Maradol papayas from, Farm 1, Distributor C (Farm 2), and Farm 3 and recalled Maradol papayas imported by Distributor B
Final Thoughts and Observations

- We needed to rapidly provide actionable public advice
  - The Kiambu/Thompson outbreak in particular was large, ongoing, and severe (40% hospitalized, 1 death)

- Providing clear messaging was challenging, however
  - Traceback investigations and papaya testing in the supply chain continually changed our understanding of the scope of the problem
  - Distributors, brand names, and farms all named in various pieces of advice
  - Papaya color and ripening (yellow papayas aren’t yellow before they ripen)
  - What about papayas from other regions (Brazil, Hawaii, Guatemala, etc.)?
  - Strong need for Spanish language advice given how many ill people were Spanish speakers
Thank you!

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Crisis Management Recap

Actions & Learnings

Wegmans and Kreher’s Farm Fresh Eggs
Issue:

• An attentive processing attendant at one of our packing facilities observed foreign residue on Styrofoam cartons making their way into production

• What was it? Where did it come from? How did it get there? How wide spread is the issue? Is there a risk to the consumer?
Issue:
Timeline:

- **Saturday**
  - Attendant noticed white residue & alerts QA Manager
  - Affected carts put on hold

- **Monday**
  - 3:30 PM - Attendant noticed white residue & alerts QA Manager who contacts carton manufacturer
  - 8:45 AM - QA Manager alerts Director of FS & QA who contacts carton manufacturer

- **Tuesday**
  - Manufacturer notifies us that issue "likely potato dust" (GRAS material)
  - We insist on overnighting samples
  - Held all carts packed on Saturday
  - Manufacturer determines that ingredient is used in their invisible ink

- **Friday**
  - Friday - Manufacturer denies using compound in their production facility
  - Kreher notify Wegmans
  - Wegmans communicates to stores to pull and hold all WB 18ct large eggs
  - Manufacturer determines that ingredient is used in their invisible ink
  - Manufacturer notifies us that issue "likely potato dust" (GRAS material)
  - We insist on overnighting samples
  - Held all carts packed on Saturday

- **Saturday**
  - Carton producer sent documentation for two inks used in their production facility
  - These were sent to Wegmans
  - Identified a purge of the ink line that occurred during an operational issue at the plant as the time frame of introduction
  - We contacted all relevant officials/shareholders
  - We contacted USDA, FDA, NYS Dept of Ag & Markets
  - 3rd party consultant on food safety, Dr. David Acheson
  - Our team worked to replace the product in question delivering 9 truck loads of eggs to stores since their on-hand inventory was being held
The Wegmans team was still asking questions of us that needed to be answered by the carton manufacturer (specifically, regarding a human risk assessment)

- The carton manufacturer hired a third party firm to perform a full toxicology analysis, but they were not able to provide sufficient response to Wegmans questions on Sunday

Heard back from Jerry Ramirez at FDA asking for additional information

- FDA wanted to see results of toxicology report before making a final decision

Continued to put pressure on carton manufacturer to provide clear insight and direct answers to questions
Timeline:

• Carton manufacturer could not provide a full toxicology report
• *Stores increasingly frustrated that their coolers were full of egg carts*
Timeline:

- Toxicology analysis delivered
- Confirmed negligible health risk
- The FDA, USDA and Acheson Group agree with the conclusions
- Wegmans releases eggs for sale at 1:15pm
Key Learnings:

• Processing & Shipping:
  • Regardless of day of the week, notify Director of any concerns
  • QA must return to plant in person to review issue firsthand
  • Assure “first in, first out” handling of all supplies: cases, cartons, flats and finished products

• Management Team
  • If we have a question or concern with any product, substantiated or not, we notify our customer immediately to discuss options
  • Continuous improvement mindset
  • Improve traceability of inputs (ERP system)
Key Learnings:

• Macro
  • Ensure your materials supplier have a full accounting of their inputs
  • Be prepared to challenge and elevate quickly!
  • Maintain and share a complete list of contacts (day-to-day and industry expertise as needed)
  • Instill and drive a shared sense of urgency and responsibility in your supply partners
Thank you!

Questions??
Food Safety Summit
What is FIPRONIL?
• Fipronil a word most of us had never heard of before became a major topic last year given the situation that arose in most parts of Europe.

• It is a chemical typically used on cats and dogs for prevention of fleas, mites, and ticks but is absolutely forbidden for animals destined for human consumption.

• There apparently was a mite problem in several areas of heavy production, and Fipronil was used as part of the solution.
FIPRONIL

Places affected by the egg scandal

- Farms shut down due to fipronil use
- Receiving contaminated eggs

Source: European Commission
FIPRONIL
• Reports of Fipronil contamination in eggs and egg products continue to spread to other countries across Europe. The European Food Standards Agency (FSA) has confirmed that 65 products containing eggs have been pulled from sale across Europe. These products range from liquid eggs to cake mixes to biscuits. With close to 200 farms in the Netherlands implicated to date in the Fipronil scandal, more than 20 million shell eggs have been withdrawn. The FSA has determined that food products containing more than 15% egg that originated from the implicated farms in the Netherlands must be withdrawn from sale. As the Netherlands is a major exporter of eggs, the scandal has resulted in contaminated eggs being detected across other parts of the world including the Middle East according to news reports.
EU PRODUCTS MARKET

US and EU Liquid Past. Yolk

Source: Urner Barry

Leadership by Egg Farmers for Egg Farmers
Red Mites
Red Mites

- Mite populations can grow fast with availability of:
  - the right temperatures (77-95°F)
  - high humidity percentages (70-90%)
  - blood from hosts, preferably birds
  - hiding places in the vicinity of the hosts resting place
  - relative low numbers of poultry red mite predators
- Temperatures below -4°F and above 113°F are considered lethal
- May survive up to 9 months without feeding under moderate climatic circumstances
Leadership by Egg Farmers for Egg Farmers

Infestation of poultry red mite leads to:

- Stress/Pecking Agitation
- Additional mortality
- Spread of poultry pathogens of bacterial and viral origin
- Anaemia
- Weight loss
- Allergic reaction in humans
- Agitation & irritation
- Higher feed conversion
- Decreased egg production
- Decreased egg quality through shell-thinning and blood-spotting
INFESTATION OF POULTRY RED MITE IN EUROPE

Number of laying hens per country in millions (2012) and poultry red mite prevalence in percentages.

Total of 11 countries: 309, 83%

- **Denmark**: 3.4 (39% in 2009)
- **Norway**: 3.6 (11% in 2012)
- **Sweden**: 7 (67% in 1995)
- **Poland**: 44.1 (80% in 2013)
- **United Kingdom**: 36.6 (87.5% in 2004)
- **Netherlands**: 33.4 (94% in 2011)
- **Belgium**: 9.2 (94% in 2011)
- **Germany**: 47.3 (94% in 2011)
- **France**: 45.9 (67% in 1998)
- **Spain**: 38.3 (90% in 2013)
- **Italy**: 40 (83% in 2008)
Imports and Fipronil

- USDA had assured UEA Further Processors that the Netherlands are fully equivalent including Continuous Inspection in a response letter addressing concerns of the industry and no shipments into the U.S. have been found to contain Fipronil.

- Fipronil Contamination:
  - Used to combat the red mite problem in Europe
  - Compound illegally used to control mites, lice, fleas, etc.
  - Not allowed to be used around Food Producing Animals
  - Contract company illegally used across the EU to control mites and lice.
  - 2 people have been arrested.
“Food Safety Case Studies Impact on the Supply Chain: Lessons Learned?”

Liabilities across the supply chain
Shawn Stevens, Food Industry Counsel

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Liabilities across the supply chain

1. Food companies continue to be harmed by mistaken presumptions of supply chain safety

2. All food companies should be doing more to identify gaps and ensure supply chain safety

3. Globalization increasingly leads to decreased supply chain transparency and increased risk

4. Globalization decreases (and in some cases eliminates) contractual protections for food companies

5. US food companies sued for selling contaminated product in many cases will not be able to seek recovery from foreign suppliers
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