Evolution of Produce Food Safety in the US: Lessons Learned

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Lessons learned

TOP 12 KEY LEARNINGS
1. In the eye of the storm: denial not a strategy
2. We are in this together: supply chain accountability
3. Size/geography don’t matter: risk profile does

• Few years ago:
  ✓ “Food safety a large producer issue”
  ✓ “Processors are the problem”
  ✓ Recent events…

• Pathogens don’t come GPS-equipped
  ✓ All crops trace back to a small plot
  ✓ All subject to contamination risks

• High risk commodities?
  ✓ Self-fulfilling process
  ✓ If you seek…
  ✓ FDA focus on process not crop
  ✓ Risk a matter of degree
4. Food safety about responsibility: understanding our tools better

- Can’t test way to safety:
  - Perishability versus enrichment
  - Sampling statistics (Pistachios)
  - Environmental sampling critical

- Standards/audits not a food safety program:
  - Outline and a communications tool
  - Corrective actions most important

- Risk assessment/management:
  - Takes action/engagement – operations differ
  - “Just tell me what to do” doesn’t work
  - Takes owning the responsibility
  - Food safety as part of business culture

- Traceability systems critical
- Data management/trend analysis
- Train, train, train…
5. Regulatory change is exceedingly slow…

- Industry support for regulation
  - “Level” playing field
  - Conflicting buyer requirements
  - Inconsistent buying practices
- Regulatory process:
  - Regulators do not know industry
  - Not a “single industry”/supply chain
  - One size doesn’t fit all - Practices vary by crop, region
  - Resources limited - Leverage existing infrastructure?
  - >50% imports
  - Capabilities of global trading partners?
  - Politics – Tester amendment
- Industry can move faster
- Partnership required
First Lawsuit Filed in Salmonella Cantaloupe Outbreak Today

POSTED BY BILL MARLER ON AUGUST 22, 2012
CHAMBERLAIN Farms

“...the five named firms could create a pool of about $20 million... "we are going to sit down with the retailers and see how they can help."

Produce News on May 30, 2012
Jensen Farms

- Suing is good business and getting better
- Up till now focus on producer
- Moving to shippers, handlers, auditors, retailers
- Retailers, foodservice will protect brands – new driver?
- Insurance and banking not far behind
7. Detect more than we currently understand…

- Regulatory surveillance tests:
  ✓ Industry versus regulatory frequency?
  ✓ Positive tests versus illness?
  ✓ What does a positive test result mean?
- CDC’s PulseNet – use of DNA “fingerprints”
  ✓ Permits identification of illness clusters
  ✓ Unrelated events can now be linked
  ✓ Identify the “vehicle” = epidemiology
  ✓ Getting better, but > 60% of 200/year unsolved
- Mathematics of outbreak
  ✓ 2 illnesses makes a “cluster”
  ✓ 1/31 reports illness; 200 illnesses, >6,000 sick
- CDC/FDA testing database
  ✓ E.g. Jensen Farms
8. We need ability to prioritize risks…

• When everything is a number 1 priority…
• Lots of “experts”, e.g. coring knives, Canadian geese, well water, etc.
• Quantitative microbial risk assessment (QMRA):
  ✓ Basis to analyze risks/control points
  ✓ Leverage industry data
  ✓ Supply chain commitment
  ✓ Understand risk in **public health** terms
  ✓ Identify research needs
• **Examples**: Tree nuts, apples
• More efficient use of resources
  ✓ Stop chasing our tails…
9. Beginning to recognize complexities…

- Biological systems are dynamic
- Food safety, environmental sustainability, plant breeding, processing all connected

**Research examples:**
- Tomatoes less susceptible to Salmonella
- Tail water reservoirs and contamination
- Animal vectors and environment
- Pathogen genetics and sanitizers

- Human behavior
  - Product consumption
  - Antacids

- Cannot continue to think in silos
10. Data needs to replace expert opinion…

- Five years ago…
  - Limited produce safety funding (e.g. USDA)
  - No data to support practices

- Center for Produce Safety – 2007
  - Address knowledge gaps
  - Integrate findings into practices
  - Educate researchers/regulators
  - Impacts:
    - Industry food safety guidance development
    - Operation-specific risk management
    - Moving to next generation thought

- New technologies are emerging:
  - Proteomics, riboprinting
  - Pasteurization
  - Antagonists
  - Process control
11. Process control is coming……

- NACMCF experience
- Other foods
- Awaiting preventive control rules:
  - “Assure FDA… minimize or prevent hazard”
  - “Must monitor effectiveness of controls…”
  - Are they doing what we think?
  - Demonstrate the control works
  - Validation and verification part of dialogue
  - Research important/develop data
- **Example 1**: “Dump and pray” wash water control
- **Example 2**: Composting
- **Example 3**: Sanitation verification
12. Food safety is about consumers...
Going forward…

- Issues raised here will continue to take shape and evolve
- Improvement cannot come without acceptance of change
- Food safety needs to be part of business culture
  - Corporate priority
  - Shared *responsibility*
- “One size fits all” solutions not likely to work
- Issues seen through biological lens
- Science and data will drive decisions
- Legal, insurance and financial climates to evolve
- Food safety progress through partnerships across supply chain
Thank you!

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