USDA-FSIS Agency Report
2012 Biennial Conference for Food Protection

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FSIS Mission*

As the public health regulatory agency in USDA, FSIS is responsible for ensuring that the nation's commercial supply of meat, poultry, and processed egg products is:

- Safe
- Wholesome
- Correctly labeled and packaged

*Jurisdiction – slaughter through consumer sale for livestock and poultry products; egg handling through pasteurization for processed egg products. Primary statutes -- EPIA, FMIA, PPIA
Goals

1. Align food safety inspections with risks
2. Maximize compliance with food safety practices
3. Enhance public education and outreach
4. Strengthen collaboration among stakeholders
5. Effectively use science
6. Implement effective policies
7. Empower employees
8. Use innovative methodologies (e.g., PHIS)

Corporate Performance Measures

1. Total # illnesses from FSIS regulated products
2. % of broiler plants passing the new *Salmonella* standard
3. % of all establishments with a functional food defense plan
4. % of slaughter plants with systematic approach to humane handling
5. % of consumers following “best practices” – cook, clean, chill, separate
### U.S. HEALTHY PEOPLE 2020

<table>
<thead>
<tr>
<th>Pathogen</th>
<th>Baseline Case Rate (infections from all foods per 100,000 population)**</th>
<th>1997</th>
<th>2010</th>
<th>2020* Target</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Campylobacter</strong></td>
<td>24.6</td>
<td>13.6</td>
<td>8.5</td>
<td></td>
</tr>
<tr>
<td><em>Escherichia coli O157:H7</em></td>
<td>2.1</td>
<td>0.9***</td>
<td>0.6</td>
<td></td>
</tr>
<tr>
<td><strong>Listeria monocytogenes</strong></td>
<td>0.47</td>
<td>0.3</td>
<td>0.2****</td>
<td></td>
</tr>
<tr>
<td><strong>Salmonella</strong></td>
<td>13.6</td>
<td>17.6</td>
<td>11.4</td>
<td></td>
</tr>
</tbody>
</table>

• *CDC MMWR – June 10, 2011; 60(22): 749-755*
• **Minor revisions were made in some case rates in November 2000**
• ***First met in 2004 and then again in 2009 and 2010; CDC tracks non-O157 STEC and for CY2010, the case rate was 1.0 (greater than that for O157 STEC)**
• ****Changed to year 2005 by Presidential Executive Order**
# U.S. HEALTHY PEOPLE 2020 (continued)

<table>
<thead>
<tr>
<th>Food</th>
<th>2005-2007 Baseline # Outbreaks from STEC O157, <em>Campylobacter</em>, <em>Listeria monocytogenes</em>, and <em>Salmonella</em></th>
<th>2020 Target for Outbreaks*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beef</td>
<td>200</td>
<td>180</td>
</tr>
<tr>
<td>Poultry</td>
<td>258</td>
<td>232</td>
</tr>
</tbody>
</table>

- *Represents a 10% decrease from baseline*
# Magnitude of the Problem for FSIS

<table>
<thead>
<tr>
<th>Pathogen</th>
<th>Measures</th>
<th>Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Salmonella</em></td>
<td>Baseline 2005-2007</td>
<td>FY 2015</td>
</tr>
<tr>
<td></td>
<td>576,436</td>
<td>531,574</td>
</tr>
<tr>
<td><em>E. coli O157:H7</em></td>
<td>20,415</td>
<td>16,315</td>
</tr>
<tr>
<td><em>Listeria monocytogenes</em></td>
<td>1,236</td>
<td>1,002</td>
</tr>
<tr>
<td><strong>All Illness</strong></td>
<td>598,087</td>
<td>548,890</td>
</tr>
</tbody>
</table>

- In July 2011, *Campylobacter* in poultry carcasses and in March 2012, six non-O157 STEC in raw beef will be added to the calculations for the All-Illness measure in FY2012.
- A 4% decrease in illnesses associated with *Salmonella* through FY2015 is the primary driver for overall public health improvement from foods regulated by FSIS.
To be functional, an establishment must develop, write, implement, test, assess, and maintain the food defense plan.

Data is obtained from the annual FSIS Food Defense Plan Survey.

<table>
<thead>
<tr>
<th>Meat and Poultry Establishment HACCP Size</th>
<th>FY 2010</th>
<th>FY 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large</td>
<td>97.1 %</td>
<td>96.0 %</td>
</tr>
<tr>
<td>Small</td>
<td>83.2 %</td>
<td>84.0 %</td>
</tr>
<tr>
<td>Very Small</td>
<td>63.6 %</td>
<td>64.0 %</td>
</tr>
<tr>
<td>Total</td>
<td>73.6 %</td>
<td>75.0 %</td>
</tr>
</tbody>
</table>
FSIS has the authority to sample product and food contact surfaces at retail to ascertain sanitary conditions and to ensure that meat and poultry are not adulterated; activities are through the FSIS in-commerce surveillance program.

At retail, the FSIS burden for establishing adulteration is different than it is at Federal plants.

- At retail, FSIS has to prove that product in commerce is adulterated whereas in official establishments product cannot enter commerce until FSIS determines that product is not adulterated.
- FSIS focus is on high risk practices (e.g., grinding beef steaks and roasts not intended for grinding).
Mechanically Tenderized Meat and Poultry Products

- The Agency expects to propose in Spring 2012 that raw, needle or blade mechanically tenderized beef products be labeled to indicate that they are “mechanically tenderized”

- Cooking instructions must be validated to ensure adequate pathogen destruction under customary cooking methods

- Labeling would apply to consumer ready product, product going to food service facilities, and product going to other Federal establishments for further processing

- Product can be labeled as “not mechanically tenderized” or as “intact”
Retail Recordkeeping for Raw Beef

FSIS expects to propose in Spring 2012 precedent-setting recordkeeping regulations applicable to retail operations in which operators must maintain grinding log records for raw ground beef production, including evidence of sanitary control.

This action will significantly improve the ability of FSIS to conduct effective traceback investigations.
Allergens

- The Agency enforces allergen-related policy using the FMIA, PPIA, and EPIA but closely aligns allergen policy according to the FDA Food Allergen Labeling and Consumer Protection Act (FALCPA)
What Caused Allergen Recalls in 2011?

- New Ingredient and/or New Supplier
- Misprinted Label
- Product in wrong package
- Product reformulated
- Ingredient reformulated

ALWAYS make SURE ALL ingredients and sub-ingredients are declared on the finished product label

SOURCE: OFO/RMS
Cross-Contamination at Retail

**Facts:**
- Higher prevalence and level of *Listeria monocytogenes* (*Lm*) in products that are sliced at retail vs. sliced by manufacturer (Gombas et al., 2003; NAFSS, 2008)
- 83% of the listeriosis cases associated with deli meats are from those sliced at retail (FSIS Comparative Lm Risk Assessment (2010); Endrikat et al., 2010)

**Hypothesis:** at retail
- Additional cross-contaminations?
- Temperature abuses?

**Risk Management Questions:**
- “What are the key processes that lead to additional *Lm* contamination / higher levels at retail?”
- “How much is the relative risk/serving reduced according to specific risk management options?”

(NAFSS, 2008)
Overview: Interagency Retail Lm Risk Assessment Model

- Retail cross-contamination model
  - Models from retail to consumption and corresponding risk of listeriosis

- All incoming Lm contamination is tracked and the accounted for in this model ("mass balance")

- Considers:
  - Prevalence and levels of incoming RTE products that will be sliced, opened, and/or prepared at retail (deli salad, cheese, deli meats)
  - Transmission among: product, slicers, handles, display cases, utensils, etc. (multiple pathways)
  - Growth of Lm (time/temperature; pH, water activity, presence of growth inhibitors)
  - Inactivation of Lm (cleaning/sanitizing; removal of gloves)
“What if” Scenarios

1. Worker Behavior & Sanitation
2. Growth Control & Incoming Lm on Product
3. Control the “level” (load) of Lm on incoming product
General Risk Assessment Findings

- The incoming level of Lm on RTE foods is the primary driver of the public health risk for products prepared, sliced, or exposed to the retail environment
  - All RTE foods, including those that do not support Lm growth, “seed” the retail environment and are major contributors to cross-contamination at retail

- Control of niches in the retail environment is critical
  - Translate “lessons learned” from processors to retailers

- Use of growth inhibitors in formulating RTE products significantly reduces the public health risk (mitigating growth at retail and out to the consumer)
General Risk Assessment Findings - continued

- Maintaining deli case temperatures <5°C (41°F) reduces the risk by 43%
  - Cost-effective control for retailers (“low hanging fruit”)

- The role of sanitation to mitigate risk needs to be further explored in model
  - Challenge: cross-contamination at retail occurs in minutes, while sanitation is done in hours; result: sanitation may never be frequent enough (evaluate the role of harborage)

- Caveat: only test for Lm (Lspp not correlated to Lm at retail)
FSIS Plans to Enhanced Controls for Lm

- Develop a surveillance program aimed at better ensuring that RTE meat and poultry products at retail operations are not adulterated through insanitary practices at that operation
  - Evaluate the sanitary conditions, including the microbial profile of the environment (non-food contact surfaces) that could lead to sampling of product and food contact surfaces
  - Outreach to that operation could include best practice mitigations for preventing insanitary conditions from emerging, as informed by the interagency risk assessment
  - Collaboration with FDA and State/local public health partners will play a key role in this new focus by FSIS
Finalize Lethality Performance Standards for RTE Products

- Follow-up on the 2001 proposed rule to establish food safety lethality performance standards for all RTE meat and poultry products.

- FSIS is currently working to issue this rulemaking before the next CFP (expect a less rigorous lethality than proposed for meat -- now 5 log reduction for *Salmonella*; a 7 log reduction for *Salmonella* in poultry product) and a less rigorous cooling time frame for cooked products.
Thank you

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