Salmonella Braenderup and Salmonella Worthington in Mangoes: Traceback and Product Actions

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FDA Response Activities
8/24/2012-10/23/2012

• FDA Traceback activities began after the health advisory alert was issued by Canada
• FDA worked closely with CA state officials
  ★ CDPH served as lead agency on traceback investigation
  ★ FDA worked to supply information on supply chain locations outside of CA
• Based on epi, traceback and laboratory findings, FDA pursued regulatory action
The Complex Traceback

Courtesy CDPH Food and Drug Branch
A Simplified Look

- 14 cases from Canada
- 1 case from Wisconsin
- 14 cases from California

Splendid

Coast Citrus

GM Produce

Foodsource

Agricola Daniella
Positive *Salmonella* Samples

- Based on locations identified by traceback, samples were collected along the supply chain

- 15 cases from Canada
- 1 case from Wisconsin
- 14 cases from California

- Splendid
- Coast Tropics
- GM Product
- Foodsource
- Agricola Daniella
Positive *Salmonella* Samples

• None of the *Salmonella* sp. isolated from the mangoes were a match to either outbreak strain
• 3 of the positive mango samples were collected by FDA
• 1 of the positive samples was collected by an importing firm
• Environmental sampling-
  ★ Due to travel restriction imposed by the Department of State, FDA was unable to visit Agricola Daniella and perform environmental sampling
FDA Regulatory Actions

- **Recall**
  - Twenty-four firms recalled products
  - Major recalls by 4 importers
  - No recall by grower

- **Agricola Daniella placed on FDA Import Alert**
  - Firm voluntarily suspended operations during the investigation
  - The firm has since been removed from the import alert due to significant improvements made to prevent future contamination issues
Challenge #1: Product Labeling

- Mango Brand Names and Labeling
  - Mangoes from Agricola Daniella were labeled with the following brand names:

<table>
<thead>
<tr>
<th>Brand Name</th>
<th>Supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daniella</td>
<td>Twins</td>
</tr>
<tr>
<td>Five Sisters</td>
<td>Porvenir</td>
</tr>
<tr>
<td>Coast Tropical</td>
<td>Tomorrow’s Tropical</td>
</tr>
<tr>
<td>Marathon</td>
<td></td>
</tr>
</tbody>
</table>

- All brand names (except Daniella) were supplied by multiple mango growers
- Due to product comingling, there was no way for consumers to know what was from Daniella, and what came from other suppliers
Challenge #2: Public Communication

• Given the labeling issue presented in Challenge #1, how can we inform the public with consideration to product industry?

• This challenge highlights the importance for improved product traceability
  
  ★ FDA FSMA Section 204: ENHANCING TRACKING AND TRACING OF FOOD AND RECORDKEEPING

• Improved traceability may help:
  
  ★ Improve product traceback in response to an outbreak
  
  ★ Narrow the scope of implicated product, protecting growers or suppliers not involved in a contamination incident
Challenge #3: International Firm

- This outbreak highlights the need for international traceback training.
- Given there were no positive samples matching the outbreak strain, it was difficult for the firm to understand traceback findings.
- FDA CORE has coupled with the Joint Institute for Food Safety and Applied Nutrition (JIFSAN) to provide information on traceback methods to international partners.
Conclusions

• Epidemiological and traceback evidence support the finding that mangoes supplied by Agricola Daniella were the source of this outbreak.

• Additional findings of *Salmonella sp.* contamination of mangoes supplied by the firm support the role of the firm in this incident.

• Continue outreach with international partners on outbreak investigation techniques
Acknowledgements

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