University at Albany
Center for Public Health Preparedness
Grand Rounds Series
Food Safety: Challenges and Opportunities

Original Broadcast Date: September 29, 2011
Guest Speakers

Stephen Stich
Director, Food and Safety Inspection
New York State Department of Agriculture and Markets

and

Robert B. Gravani, PhD
Department of Food Science
Cornell University
Sponsored by

This broadcast is supported under a cooperative agreement from the Centers for Disease Control and Prevention (CDC). Grant number 1U90TP000404-01. The contents of this program do not necessarily represent the official views of the CDC.
Viewer Call-In

Phone: 800-452-0662
Fax: 518-426-0696
E-mail: nynjbroadcast@gmail.com
Evaluations

Please visit www.ualbanycphp.org/eval to fill out your evaluation.

Thank you!
NYS A&M
Imported Foods Initiative

Stephen D. Stich
NYS Department of Agriculture and Markets

September 29, 2011
NYS Department of Agriculture & Markets: Division of Food Safety and Inspection

Regulates the State’s food industry which processes, distributes, and sells food and/or feed products.
Food Imports

• Food imports into the U.S. have grown by an average of 10% each year.

• Twenty percent (20%) of U.S. imports come through NY ports.

• U.S. Government Accountability Office estimates that 2/3 of produce consumed by Americans comes from imported sources.
How Recalls Are Generated

- Implicated in food borne illness
- Surveillance sampling by federal, state, local agencies
- Industry sampling or process deviations
- Voluntary
Food Recall Classification: Class 1

A situation where reasonable probability exists that the use of, or exposure to a violative product will cause adverse health consequences.
Food Recall Classification: Class 2

A situation where reasonable probability exists that the use of, or exposure to a violative product may cause temporary or medically reversible adverse health consequences, or where the probability of serious adverse health consequences is remote.
Food Recall Classification: Class 3

A situation where reasonable probability exists that the use of, or exposure to a violative product is not likely to cause adverse health consequences.
Actions Taken in a Food Recall

• Press release generated by firm or regulatory agency
• E-mail notification list
• NY Alert
• Recall letter to customers
• Effectiveness checks by firm
• Audit checks by regulatory agency
• Recall packet to FDA
# NYS Ag & Markets Recalls 2005-2010

<table>
<thead>
<tr>
<th>Year</th>
<th>Class 1</th>
<th>Class II</th>
<th>Class III</th>
<th>Imported vs. Domestic</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>70</td>
<td>192</td>
<td>72</td>
<td>254 Imported 80 Domestic</td>
<td>334</td>
</tr>
<tr>
<td>2006</td>
<td>22</td>
<td>223</td>
<td>106</td>
<td>269 Imported 82 Domestic</td>
<td>351</td>
</tr>
<tr>
<td>2007</td>
<td>41</td>
<td>187</td>
<td>83</td>
<td>231 Imported 80 Domestic</td>
<td>311</td>
</tr>
<tr>
<td>2008</td>
<td>43</td>
<td>204</td>
<td>54</td>
<td>241 Imported 60 Domestic</td>
<td>301</td>
</tr>
<tr>
<td>2009</td>
<td>32</td>
<td>125</td>
<td>44</td>
<td>128 Imported 73 Domestic</td>
<td>201</td>
</tr>
<tr>
<td>2010</td>
<td>52</td>
<td>149</td>
<td>36</td>
<td>173 Imported 64 Domestic</td>
<td>237</td>
</tr>
</tbody>
</table>
The Challenge: > 11,000,000 Entries/year

Diversity of Population
NYSA&M Imported Foods Initiative

A Partnership
Imported Foods Initiative

- Inspection
- Examination
- Food/Feed Sampling
- Recovery Efforts
- Resource Sharing
Imported Foods Initiative

- 8 NYSA&M Inspectors
- FDA Commissioned
- Specialized Training
- Multi-Agency
Outcomes

• FDA Registered LACF/Acidified Foods
• Unregistered State Facilities
• Laboratory Protocols
• Import Alerts
Accomplishments

• 1,637 Assignments
• 3,875 Physical Exams
• 291 Seizures/1.1M Lbs.
• 1,032 Food Samples (231 violative)
• 309 Recalls (25 Class 1)
• 14 Import Alerts
Marwan Raad
10/19/04 - 1/31/06

• Importer from Laval, Quebec, Canada
• Shipment tracing
• Collaborative investigation
• False consignee information
• Arrest and conviction using the BT provisions of the FD&C Act
Outreach
FDA Food Safety Modernization Act

Title III – Improving the safety of imported foods

• Sec 301 – Foreign Supplier verification program
• Sec 302 – Voluntary qualified importer program
• Sec 303 – Certification for high-risk food imports
• Sec 304 – Prior notice of imported foods
• Sec 305 – International Capacity Building
FDA Food Safety Modernization Act

Title III – Improving the safety of imported foods

- **Sec 306** – Inspection of foreign food facilities
- **Sec 202** – Lab Accreditation
- **Sec 307** – Accreditation of third-party auditors
- **Sec 308** – Foreign Offices of the Food and Drug Administration
- **Sec 309** – Smuggled Food
The Role of GAPs in Produce Safety

Robert B. Gravani, Ph.D.
Department of Food Science
Cornell University
Fruits and Vegetables

• Significant increases in the number of produce-associated foodborne disease outbreaks in the U.S.

• Produce-associated outbreaks per year more than doubled from 1973 to 1998
Outbreaks associated with FDA/CFSAN-regulated foods: 1996-2010


Center for Food Safety and Applied Nutrition, FDA College Park, MD
Caveats

• The data only represent those outbreaks and illnesses associated with foods regulated by FDA.

• The data do not contain information on outbreaks/illnesses where the point of contamination is retail food & institutional settings or homes.
Caveats

• The data do not include illnesses transmitted from person-to-person.

• Illness data represent only the number of illnesses reported to CDC, FDA, and state/local health departments in association with an outbreak.

• The data do not include illnesses that may have occurred but were not reported.
Reported outbreaks and illnesses linked to all FDA-regulated foods, 1996-2010

• 562 outbreaks reported
• 33,167 illnesses
• 51 deaths
Reported Outbreaks and Illnesses Linked to FDA-Regulated Produce± and Sprouts, 1996-2010

**Produce**
- 97 outbreaks reported (17.3% of total)
- 11,909 illnesses* (35.9% of total)
- 33 deaths*

**Sprouts**
- 34 outbreaks reported (6.0% of total)
- 2,137 illnesses* (6.4% of total)
- 1 death

± Excludes sprout outbreaks and illnesses
* Estimated; Data as of 5/25/2011
Produce-Related Outbreaks and Illnesses: 1996-2010

Outbreaks, N=97
Illnesses, N=11,909

Year
# of outbreaks
# of reported cases

3 4 6 5 8 6 7 10 9 7 7 6 9 9 10
1533 1389 9 8 7 1177 954 985 743 1749 1 6 6 288

FDA, 2011
Types of Produce Associated with Outbreaks, 1996-2010 (N=97)

- Berries: 7.2%
- Green onions: 10.3%
- Herbs: 17.5%
- Leafy greens: 14.4%
- Melons: 30.9%
- Tomatoes: 6.2%
- Others: 3.1%
- Unknown: 10.3%

FDA, 2011
# Disease Outbreaks Associated with Consuming Specific Types of Produce: 1996-2010

<table>
<thead>
<tr>
<th>Commodity</th>
<th>% Produce Outbreaks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lettuce/Leafy</td>
<td>30.9%</td>
</tr>
<tr>
<td>Tomatoes</td>
<td>17.5%</td>
</tr>
<tr>
<td>Melons</td>
<td>14.4%</td>
</tr>
<tr>
<td>Berries</td>
<td>10.3%</td>
</tr>
<tr>
<td>Herbs (basil, parsley)</td>
<td>6.2%</td>
</tr>
</tbody>
</table>

| Total                            | 79.3%               |

Five Commodity groups make up > 75% of produce related outbreaks
Agents Associated with Produce Outbreaks, 1996-2010 (N=97)

**Bacterial**
- E. Coli O157:H7: 26 (34.7%)
- Non-E. Coli O157:H7: 1 (1.3%)
- L. Monocytogenes: 1 (1.3%)
- Shigella: 2 (2.7%)
- Salmonella: 45 (60.0%)

**Non-Bacterial**
- Leafy Greens: 25
- Herbs: 1
- Leafy Green: 1
- Celery: 1
- Melons: 1
- Herbs: 1
- Tomatoes: 17
- Melons: 13
- Other Produce: 11
- Berries: 2
- Leafy Greens: 2

FDA, 2011
Additional Agents Associated with Produce Outbreaks, 1996-2010 (N=97)

- **Parasitic**: 18 (18.6%)
  - Cyclospora: 18 (100%)
  - Green Onions: 3
  - Berries: 8
  - Herbs: 4
  - Leafy Greens: 2
  - Unknown: 1
  - Other Produce: 3

- **Viral**: 3 (3.1%)
  - Hepatitis A: 3 (100%)

- **Toxin**: 1 (1.0%)
  - Cucurbitacin toxin: 1 (100%)
  - Squash: 1

FDA, 2011
Produce Poses Special Challenges

- Grown in a non-sterile environment
- Multiple opportunities for contamination
- Often eaten raw: it’s a ready-to-eat food
- Presence of pathogens is NOT the natural state of fresh produce
- GAPs can minimize the risks
Produce Poses Special Challenges

• Variety of fruits & vegetables grown

• Varying production conditions

✓ Soil types
✓ Water sources
✓ Irrigation methods
✓ Feral animals
✓ Proximity to animal operations
PREVENTION is the Key to Reducing Microbial Contamination of Fresh Fruits and Vegetables

Good Agricultural Practices (GAPs) are those practices needed to reduce the hazards and risks in the production of fresh fruits and vegetables
Good Agricultural Practices

Include important aspects such as:

- Water
- Manure & compost
- Worker health & hygiene
- Domestic & feral animals
- Field sanitation
- Packing house sanitation
Proactive Initiatives

- Produce buyers requiring growers to be GAPs certified
- Development of Commodity specific guidelines
- CA/AZ Leafy Greens Marketing Agreements
- FL mandatory Tomato GAPS/BMPs
- Other voluntary programs
What Can Growers and Packers do to Prevent Outbreaks?

• Learn about hazards & risks
• Assess and strengthen GAPs
• Develop a *Farm Food Safety Plan*
• Document activities
• Successfully pass a GAPs audit
Welcome to the GAPsNET
Good Agricultural Practices Network for Education and Training

Home

View National GAPs Educational Materials
Research & Extension Publications Database
Events Calendar
Web Links
Collaborators
Who We Are & Contacts

Food Safety Begins on the Farm
Updated 5/23/06
Cooperative Agreement between Cornell University, FDA, and USDA

PSA established on October 1, 2010

A 3 year project

www.producesafetyalliance.cornell.edu
PSA Primary Goals

• Develop a standardized education & training program on Good Agricultural Practices (GAPs) and co-management strategies

• Create an information bank on produce safety, GAPs, co-management and FDA's produce safety regulation
PSA Governance

- Executive Committee
- Steering Committee
  - Diverse representation from produce industry, academia and government
  - Leadership for the Working Committees
  - Guidance for curriculum development
- Working Committees
FDA Produce Safety Rule

• Part of FSMA

• Rule will include:
  
  ✓ Growing, harvesting & postharvest handling
  
  ✓ Packing of produce except where exempt from BT Act registration
  
  ✓ Fruits, vegetables, sprouts, peanuts, tree nuts and mushrooms
FDA Produce Safety Rule

The Rule will not include:

• Items usually cooked (“rarely eaten raw”)
• Products destined for a “kill step”
• Agronomic crops
• Exceptions for small farms
FDA Produce Safety Rule

- Rule will focus on practices, not commodities
- A “Hazards Guide” will be developed to assist growers
- Implementation date will vary with farm size
- Publication in early 2012
Are Good Agricultural Practices Making a Difference?

• Foodborne illnesses have made farmers and growers aware of microbial hazards and risks

• Produce buyers are requiring growers to implement GAPs and pass an audit

• Growers now recognize the importance of GAPs and food safety to their businesses
Broadcasts

• Food Safety. *Public Health Live*, February 2010

• Walk-in or Drive-thru: POD Model Comparisons from the Erie County Hepatitis A Experience
  March 26, 2009

• [http://www.albany.edu/sph/cphp.php](http://www.albany.edu/sph/cphp.php)
Thank you for your participation!