Food Safety and Inspection Service:
Office of Public Health Science

National Residue Program

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Food Safety and Inspection Service:  
**Office of Public Health Science**

Public Health Science employees:

- Assist in investigating national and international outbreaks
- Monitor current and emerging foodborne threats
- Advise leadership on matters of science to improve policies and program

FSIS performs approximately 190,000 scientific analyses every year.
NRP Overview – Past, Present, & Future
PURPOSE

• Provide a structured process for identifying and evaluating chemical hazards of concern in food animals

• Test for the presence of chemical hazards: veterinary drugs, pesticides, hormones, and environmental contaminants in meat, poultry, and egg products.

• Identify need for regulatory follow-up when violative levels of chemicals residues are found
Food Safety and Inspection Service:

**NRP Sampling Structure**

- **Domestic Sampling Plan**
  - Scheduled Sampling
  - Inspector Generated Sampling

- **Import Sampling Plan**
  - Normal Sampling
  - Increased Sampling
  - Intensified Sampling
Food Safety and Inspection Service:
NRP Overview

**MOU: Memorandum of Understanding:**
- Working relationship between FSIS, AMS, FDA, EPA to coordinate regulatory activities for residues
- FSIS consults mainly with FDA and EPA, as applicable, to share and compare updated information on regulations

**IRCG: Interagency Residue Control Group:**
- FSIS/FDA/EPA/AMS/CDC/ARS; monthly meetings for updates and collaborating relative to the NRP

**SAT: Surveillance Advisory Team:**
- Interagency committee that determines the chemical compounds and production classes of public health concern
• FSIS tests meat, poultry, and egg products and enforces tolerances at slaughter establishments

• FSIS allocates resources for adding veterinary drugs & pesticides to NRP across meat, poultry, and egg products

• FSIS collaborates with FDA & EPA on tracebacks
Food Safety and Inspection Service: Interagency Collaboration

- FDA & EPA codify tolerances for veterinary drugs and pesticides
- FDA & EPA work with FSIS to provide traceback to farms, producers, and veterinarians as applicable
- FDA & EPA work with FSIS to recommend veterinary drugs and pesticides to include in NRP
- FDA & EPA rely on FSIS to provide testing results
• FSIS announcement of restructuring NRP - July 2012
• Multi-residue chemical methods and sample scheduling algorithms
• Revamping the scheduled sampling program
## Scheduled Sampling Program (Plan)

<table>
<thead>
<tr>
<th>Compound Class</th>
<th>Number of Samples</th>
<th>Chemicals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antibiotics</td>
<td>251</td>
<td>38</td>
</tr>
<tr>
<td>Flunixin</td>
<td>253</td>
<td>1</td>
</tr>
<tr>
<td>Sulfonamides</td>
<td>177</td>
<td>21</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>681</strong></td>
<td><strong>60</strong></td>
</tr>
</tbody>
</table>
## Scheduled Sampling Program (Plan)

<table>
<thead>
<tr>
<th>Compound Class</th>
<th>Number of Samples</th>
<th>Chemicals</th>
</tr>
</thead>
<tbody>
<tr>
<td>MRM</td>
<td></td>
<td>56</td>
</tr>
<tr>
<td>AMG</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>Pesticides</td>
<td></td>
<td>91</td>
</tr>
<tr>
<td>Metals</td>
<td></td>
<td>17</td>
</tr>
<tr>
<td>Avermectins</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>B - Agonists</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Arsenic</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>600</strong></td>
<td><strong>182</strong></td>
</tr>
</tbody>
</table>

* Truncated sampling year
## Scheduled Sampling Program FY14

<table>
<thead>
<tr>
<th>Methods</th>
<th>Production Class</th>
<th>Domestic</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Beef cows</td>
<td>Dairy cows</td>
</tr>
<tr>
<td>Multi-class (MRM)</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Amino-glycoside</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Pesticides</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Metals</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>B-agonists</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Carbadox</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avermectins</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Arsenic</td>
<td>√</td>
<td>√</td>
</tr>
</tbody>
</table>
• Analyzing for known chemical hazards
  – More samples allocated for Scheduled (Domestic) Sampling (800 samples vs 300)
  – Fewer samples allocated for Import (Reinspection) Sampling (1500 vs 3,000 annual)
  – Inspector-Generated sampling: Unchanged

• Analyzing for unknown chemical hazards
  – Current methods identify only chemicals extended to method
Slaughter Classes
- Major slaughter classes included in annual domestic scheduled program
- Minor slaughter classes tested more infrequently
- Major slaughter classes eligible for Inspector-generated testing

Chemical Hazard Categories Analyzed:
- Veterinary drugs
  - Antibiotics, B-agonists, Hormones, NSAIDs
- Pesticides
  - Organophosphates, Carbamates, Pyrethroids
- Metals
  - Heavy & Trace
Food Safety and Inspection Service: Future Direction

NRP - NEXT STEPS
• Outreach at Inter-Agency level
  ▪ Working with FDA & EPA to prioritize vet drugs & pesticides to add to NRP
  ▪ Working with Agencies to identify chemical hazards of concern

• Outreach to other stakeholders
  ▪ Symposia and poster presentations
  ▪ Food Safety Advisory Committees
NRP Charge

- FSIS would like NACMPI to provide feedback on how FSIS is managing chemical hazards within the NRP
  - If the committee agrees with FSIS’ approach, why?
  - If the committee disagrees, what are their recommendations for improvement?
NRP Charge

Does the committee agree with how FSIS allocates samples across the current NRP sampling structure?

- Is FSIS allocating the right proportion of samples for the domestic vs the import program?
- Is FSIS allocating the right proportion of samples across the domestic program – scheduled vs inspector-generated program?
- Is FSIS allocating samples across slaughter classes effectively?
NRP Charge

• Does the committee agree with FSIS’ emphasis on known (vs unknown) chemical hazards?

• How should FSIS consider chemical categories – equally or ranked relative to each other?
Food Safety and Inspection Service:

NRP

Questions?