NVSL Salmonella, Mycoplasma and Pasteurella multocida Update

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NVSL *Salmonella* Update

- Integration of xMAP *Salmonella* molecular serotyping assay
- NPIP group D and *Salmonella* serotyping proficiency tests to be sent 10/28/2014
Salmonella Serotyping

- 15,209 isolates submitted in 2013
  - 5,516 Clinical
  - 6,753 Non-Clinical
  - 2,940 Research and other
- 5290 from chicken/turkey sources
## Most Common Serotypes – Chickens 2013

<table>
<thead>
<tr>
<th>Rank</th>
<th>Clinical</th>
<th>Non-Clinical</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Enteritidis</td>
<td>Senftenberg</td>
</tr>
<tr>
<td>2</td>
<td>Kentucky</td>
<td>Kentucky</td>
</tr>
<tr>
<td>3</td>
<td>Typhimurium</td>
<td>Mbandaka</td>
</tr>
<tr>
<td>4</td>
<td>Heidelberg</td>
<td>Heidelberg</td>
</tr>
<tr>
<td>5</td>
<td>Mbandaka</td>
<td>Enteritidis</td>
</tr>
</tbody>
</table>
Salmonella Group D

- Chicken submissions, clinical + non-clinical
- 436 Group D isolates
- 400 (91%) were SE
- Other 9%: Javiana, Berta, Ouakam, Alabama
## Most Common Serotypes - Turkeys 2013

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<th>Non-Clinical</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Senftenberg</td>
<td>Senftenberg</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Albany</td>
<td>Hadar</td>
<td>⇝</td>
</tr>
<tr>
<td>3</td>
<td>Montevideo/Bredeney</td>
<td>Anatum</td>
<td>⇝</td>
</tr>
<tr>
<td>4</td>
<td>Ouakam</td>
<td>Albany</td>
<td>⇝</td>
</tr>
<tr>
<td>5</td>
<td>Heidelberg</td>
<td>Muenster</td>
<td>⇛</td>
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</tbody>
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Molecular Typing

- The xMAP *Salmonella* assay is utilized for some serotyping at the NVSL
- Maintain ability to perform gold standard of conventional serotyping
- Used to screen *Salmonella* isolates in the recent outbreak involving bearded dragon lizards
Molecular Typing: SE assay

- SE rule out testing for FDA egg rule
  - Receipt of samples that were not typeable via classic testing
    - Rough O:g,m:-
    - 9,12:poorly-motile
    - 9,12:non-motile
  - xMAP *Salmonella* assay to determine the presence of *sdf* gene
    - *sdf* specific to SE
Salmonella Pullorum

• 331 Salmonella Pullorum serological tests
• 2250 mL Salmonella Pullorum tube antigen provided
• 1575 mL Salmonella Pullorum stained microtiter antigen provided
• 502 mL of control antisera provided
NVSL Pasteurella multocida Update

- 145 isolates for somatic typing
- 114 isolates for DNA fingerprinting
- 61 vials of antisera supplied
- 9 reference isolates supplied
NVSL Avian *Mycoplasma* Update

- 394 Hemagglutination inhibition tests
- 555 mL of Hemagglutination antigen supplied
  - 290 mL MS
  - 245 mL MG
  - 40 mL MM
- 1656 mL of control antiserum supplied
  - 672 mL MS
  - 532 mL MG
  - 108 mL MM
  - 344 mL Negative control
Contact Information

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Questions?