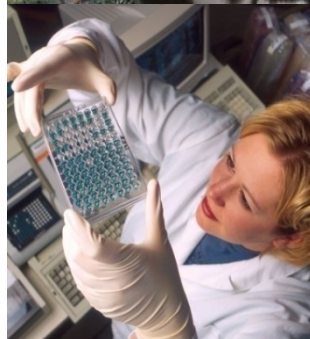


Veterinary Services



NVSL *Salmonella*, *Mycoplasma* and *Pasteurella multocida* Update

Brenda Morningstar-Shaw
Microbiologist

U.S. Department of Agriculture
Animal and Plant Health Inspection Service
Veterinary Services
Science, Technology and Services
October 2014









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

Rank	Clinical	Non-Clinical
1	Enteritidis	Senftenberg 
2	Kentucky	Kentucky
3	Typhimurium	Mbandaka 
4	Heidelberg 	Heidelberg 
5	Mbandaka 	Enteritidis 

***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

Rank	Clinical	Non-Clinical
1	Senftenberg	Senftenberg
2	Albany	Hadar 
3	Montevideo/ Bredeney 	Anatum 
4	Ouakam 	Albany 
5	Heidelberg 	Muenster 

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

- *Salmonella* serotyping
 - Brenda.R.Morningstar@aphis.usda.gov
- *Pasteurella multocida*
 - Corrie.L.Tichenor@aphis.usda.gov
- *Mycoplasma*
 - Kari.L.Toot@aphis.usda.gov
- General Bacteriology
 - Linda.K.Schlater@aphis.usda.gov

Questions?

