Veterinary Services


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Animal and Plant Health Inspection Service
Veterinary Services
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Today’s Commercial Poultry Industry

- 8.8 Billion Meat Chickens
- 260 Million Meat Turkeys
- 1.0 Billion Table-Egg Layers
- 140 Million Meat-Type Breeding Chickens
- 5.8 Million Egg-Type Chicken Breeding Chickens
- 28 Million Breeding Turkeys
- 225 Egg & Meat-Type Chicken Hatcheries
- 37 Turkey Hatcheries
- $45 Billion Industry 2015
Objective

• To provide a cooperative Industry-State-Federal program through which new diagnostic technology can be effectively applied to the improvement of poultry and poultry products throughout the country.

NPIP Administration

• 49 Official State Agencies
• 1 US Territory Official Agency
• 98 Authorized Laboratories
• Provisions are in the Code of Federal Regulations (9 CFR parts 56, 145, 146 and 147 and Program Standards)
• General Conference Committee – Secretary of Agriculture’s Official Advisory Committee on Poultry Health
• Participating Hatcheries
  – Egg and Meat Type Chicken Hatcheries – 237
  – Turkey Hatcheries – 45
  – Waterfowl, Exhibition Poultry, and Game Birds – 734
NPIP Participating Breeding Flocks and Birds

- **Egg-Type Chickens**
  - 261 Flocks with 5,617,813 birds

- **Meat-Type Chickens**
  - 6108 Flocks with 129,022,446 birds

- **Turkeys**
  - 562 Flocks with 23,510,786 birds

- **Waterfowl, Exhibition Poultry, and Game Birds**
  - 6,397 Flocks with 2,191,933 birds

- **Meat-Type Waterfowl**
  - 90 Flocks with 161,824 birds

Official NPIP Classifications

- **Breeder Classifications**
  - U.S. Pullorum Typhoid Clean
  - U.S. Mycoplasma Gallisepticum Clean
  - U.S. Mycoplasma Synoviae Clean
  - U.S. Mycoplasma Meleagridis Clean
  - U.S. Mycoplasma Gallisepticum Monitored
  - U.S. Mycoplasma Synoviae Monitored
  - U.S. Salmonella Enteritidis Clean
  - U.S. Salmonella Enteritidis Monitored
  - U.S. Sanitation Monitored
  - U.S. Salmonella Monitored
  - U.S. Avian Influenza Clean
  - U.S. H5/H7 Avian Influenza Clean

- **Commercial Production Classifications**
  - U.S. H5/H7 Avian Influenza Monitored
### NPIP-Specific Diseases

- Salmonella pullorum
- Salmonella gallinarum
- Mycoplasma gallisepticum
- Mycoplasma synoviae
- Mycoplasma meleagris
- Salmonella enteriditis
- Salmonella sp. (Sanitation monitored)
- Avian influenza
- H5/H7 LPAI Commercial

### NPIP Salmonella Programs

- Pullorum-Typhoid Clean
- SE Clean
- SE Monitored
- Sanitation Monitored
- Salmonella Monitored
Pullorum-Typhoid Eradication

- *Salmonella pullorum* and *Salmonella gallinarum* eradication program – 1935

- Pullorum
  - 2010 – None
  - 2011 – Two in backyard poultry
  - 2012 – None
  - 2013– None
  - 2014– None
  - 2015– None

- Fowl Typhoid — No isolation since 1987

### NPIP SE (Egg-Type Chicken Breeding Flocks)
Isolates by Phage Type 1989-2015

<table>
<thead>
<tr>
<th>Year</th>
<th>No. Flocks</th>
<th>Phage Type</th>
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<tbody>
<tr>
<td>1989</td>
<td>1</td>
<td>13A</td>
</tr>
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<td>1990</td>
<td>11</td>
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<td>13A, 28</td>
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<td>1996</td>
<td>5</td>
<td>Untypable, RNDC, 13A, 8, 2</td>
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<td>1999</td>
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<td>13</td>
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<tr>
<td>2003</td>
<td>0</td>
<td>n/a</td>
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<tr>
<td>2004</td>
<td>0</td>
<td>n/a</td>
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<tr>
<td>2005</td>
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<td>13</td>
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<td>8</td>
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<tr>
<td>2010</td>
<td>3</td>
<td>B22, 13</td>
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<td>2011</td>
<td>0</td>
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<td>2014</td>
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<td>2015</td>
<td>0</td>
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**Mycoplasma Programs**

- U.S. MG Clean
- U.S. MS Clean
- U.S. MM Clean
- U.S. MG Monitored
- U.S. MS Monitored

**Percent Condemnation for Airsacculitis by Year for Commercial Broilers**

![Graph showing percent condemnation for Airsacculitis by year for commercial broilers]
Mycoplasma gallisepticum, Mycoplasma synoviae, and Mycoplasma meleagridis in Breeding Poultry 2014–2015

Avian Influenza Programs

AI Clean
- Egg & meat multipliers & primaries, and ostrich/rhea/emu breeders

H5/H7 AI Clean
- Turkeys, WEGBY & waterfowl breeders

H5/H7 AI Monitored
- Commercial layers, broilers, turkeys, & WEGBY
NPIP Avian Influenza Surveillance Summary by Subpart 2014-2015 Antibody and Antigen Detection

<table>
<thead>
<tr>
<th>Subpart</th>
<th>Flocks</th>
<th>Birds</th>
<th>Tests</th>
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<tbody>
<tr>
<td>Egg-Type Chicken Breeders</td>
<td>280</td>
<td>5,785,681</td>
<td>22,794</td>
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<td>Table-Egg Layers-Commercial</td>
<td>6,223</td>
<td>1,035,237,331</td>
<td>144,587</td>
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<td>Chicken Breeders</td>
<td>9,082</td>
<td>140,170,728</td>
<td>477,681</td>
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<td>Chickens-Commercial</td>
<td>111,282</td>
<td>8,823,120,888</td>
<td>1,403,096</td>
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<td>Turkey Breeders</td>
<td>1,107</td>
<td>28,359,997</td>
<td>58,001</td>
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<td>Turkeys-Commercial</td>
<td>21,798</td>
<td>259,805,524</td>
<td>214,361</td>
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<td>Waterfowl, Upland Game birds, Ex. Poultry</td>
<td>6,487</td>
<td>2,353,757</td>
<td>412,284</td>
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<td>Upland Game birds, Waterfowl, Raised for Release Upland Game birds, Raised for Release Waterfowl:Commercial</td>
<td>3,064</td>
<td>45,526,914</td>
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<td>Total</td>
<td>159,323</td>
<td>10,340,360,820</td>
<td>2,773,764</td>
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</tbody>
</table>

Notifiable Low Pathogenicity AI Outbreaks FY2015

USA submitted one commercial poultry LPAI notification to OIE

- California
  - Merced County
  - H7N3 virus positive
  - commercial turkeys
NVSL Annual Proficiency Tests

- Group D *Salmonella* check test
- *Salmonella* serotyping Check Test
- AI AGID check test
- AI ELISA check test
- NVSL/PDRC Mycoplasma serology proficiency test

### NPIP Lab Requirements
- Check Test Proficiency
- Trained Technicians
- Laboratory Protocol
- State Site Visit - Annually
- NPIP Review
- Reporting - MOU
- Verification - Duplicate Samples

Laboratory Services Provided to Authorized Laboratories of NPIP

- Annual Salmonella Isolation and Identification Workshop for authorized laboratories sponsored by the GPLN, UGA, U of A, TPF, ISPA, Purdue University [1994-2015]
- Three videos sponsored by the U.S. Poultry and Egg Association on Salmonella:
  - Isolation and Identification
  - Sampling and Collection
  - Serology
Laboratory Services Provided to Authorized Laboratories of NPIP

  – Culture, Media preparation, Air sac scoring, ELISA
  – Fluorescent antibody typing, PCR, Random Polymorphic, DNA Fingerprinting.

• Avian Influenza Diagnostic Workshop 2000-2015 held at the PDRC.
  – Biology of Avian Influenza
  – Avian influenza in layers & turkeys
  – Rapid HA/HI test
  – Laboratory diagnosis of avian influenza
  – RT-PCR test for avian influenza
  – AGID test antigen production
  – Tests to distinguish avian influenza virus from avian paramyxovirus
  – AGID (AGID accreditation CD)
  – ELISA
Thank You

Questions?