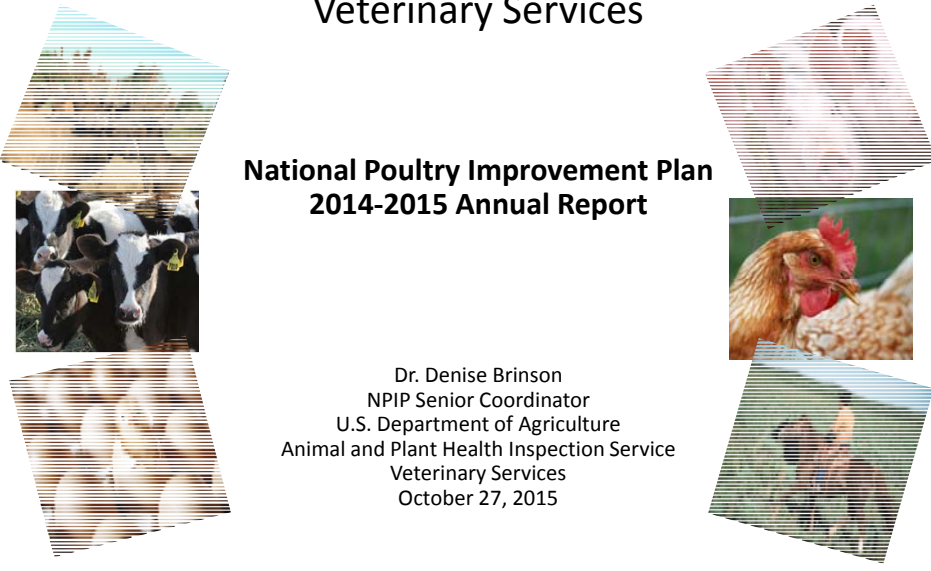

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Veterinary Services

National Poultry Improvement Plan 2014-2015 Annual Report



Dr. Denise Brinson
NPIP Senior Coordinator
U.S. Department of Agriculture
Animal and Plant Health Inspection Service
Veterinary Services
October 27, 2015



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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**

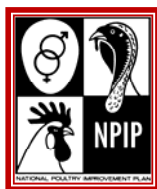




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Objective

- 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.



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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**



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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

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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



U.S.
Pullorum-Typhoid
CLEAN
NPIP
FIGURE 3

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NPIP-Specific Diseases

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

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NPIP Salmonella Programs

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



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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

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


| Year | No. Flocks | Phage Type |
|------|------------|---------------------------|
| 1989 | 1 | 13A |
| 1990 | 11 | 13A, 13, 8, 28 |
| 1991 | 12 | 13A, 13, 8 |
| 1992 | 10 | Untypable, 13A, 8, 28, 34 |
| 1993 | 5 | Untypable, 8, 2 |
| 1994 | 3 | 13A, 8 |
| 1995 | 2 | 13A, 28 |
| 1996 | 5 | Untypable, RND, 13A, 8, 2 |
| 1997 | 2 | 8 |
| 1998 | 2 | 8 |
| 1999 | 1 | 13 |
| 2000 | 4 | 13, 8 |
| 2001 | 1 | 13 |
| 2002 | 0 | n/a |
| 2003 | 0 | n/a |
| 2004 | 0 | n/a |
| 2005 | 1 | 13 |
| 2006 | 1 | 34 |
| 2007 | 4 | 13, 8 |
| 2008 | 3 | 8 |
| 2009 | 0 | n/a |
| 2010 | 3 | 8(2), 13 |
| 2011 | 0 | n/a |
| 2012 | 0 | n/a |
| 2013 | 0 | n/a |
| 2014 | 1 | n/a |
| 2015 | 0 | n/a |

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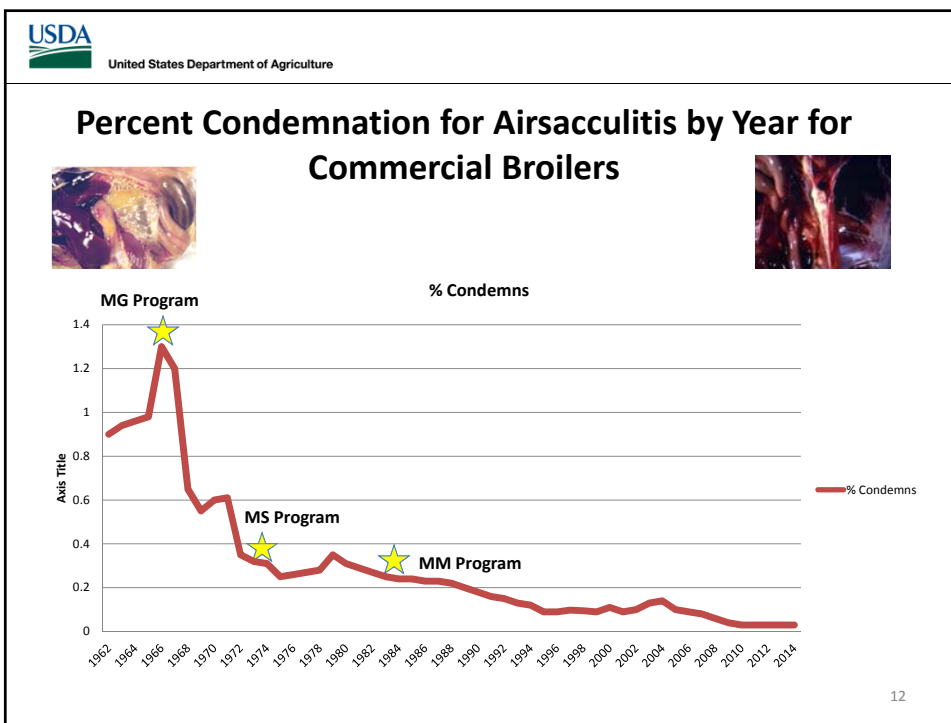
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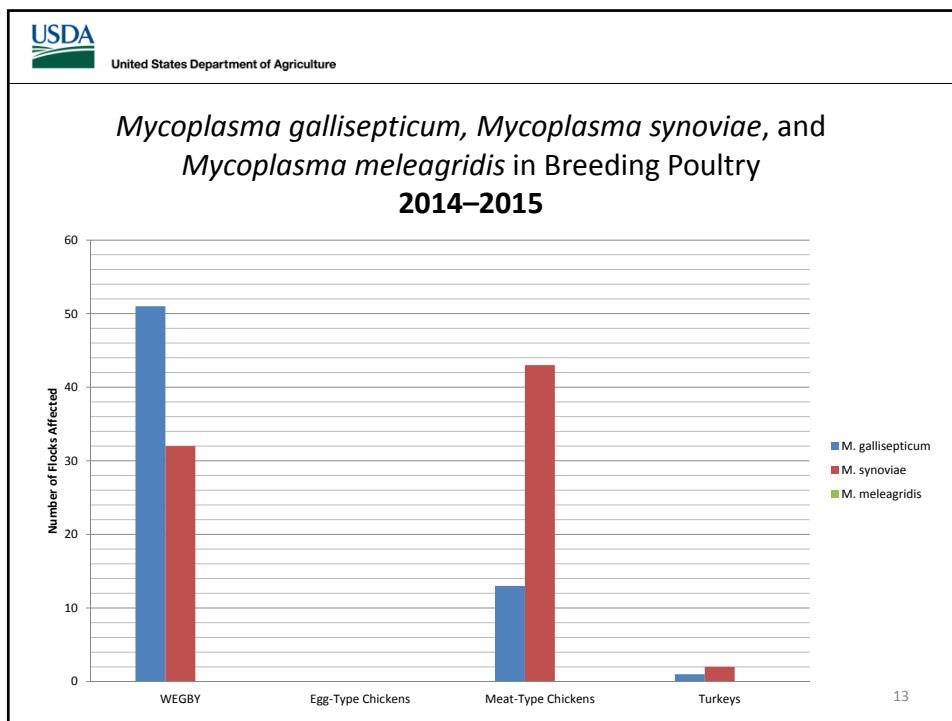
Mycoplasma Programs

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



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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

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NPIP Avian Influenza Surveillance Summary by Subpart 2014-2015 Antibody and Antigen Detection

| Subpart | Flocks | Birds | Tests |
|---|----------------|-----------------------|------------------|
| Egg-Type Chicken Breeders | 280 | 5,785,681 | 22,794 |
| Table-Egg Layers-Commercial | 6,223 | 1,035,237,331 | 144,587 |
| Chicken Breeders | 9,082 | 140,170,728 | 477,681 |
| Chickens-Commercial | 111,282 | 8,823,120,888 | 1,403,096 |
| Turkey Breeders | 1,107 | 28,359,997 | 58,001 |
| Turkeys-Commercial | 21,798 | 259,805,524 | 214,361 |
| Waterfowl, Upland Game birds, Ex. Poultry | 6,487 | 2,353,757 | 412,284 |
| Upland Game birds, Waterfowl, Raised for Release Upland Game birds, Raised for Release Waterfowl-Commercial | 3,064 | 45,526,914 | 40,960 |
| Total | 159,323 | 10,340,360,820 | 2,773,764 |

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Notifiable Low Pathogenicity AI Outbreaks FY2015

USA submitted one *commercial poultry* LPAI notification to OIE

- California
 - Merced County
 - H7N3 virus positive
 - commercial turkeys

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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



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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



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Laboratory Services Provided to Authorized Laboratories of NPIP

- Mycoplasma Diagnostic Workshop for laboratory personnel 1999-2015 PDRC, Athens, GA, lead by Drs. Ferguson-Noel and Kleven.

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



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Laboratory Services Provided to Authorized Laboratories of NPIP

- 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





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Thank You



Questions?