

# Avian Health Business Plan

## Fiscal Years 2014 to 2018

### Animal and Plant Health Inspection Service Veterinary Services

#### I. Program Description

##### a. Program objectives:

The overall objective of the Animal and Plant Health Inspection Service (APHIS), Veterinary Services (VS) Avian Health Program is to safeguard the U.S. poultry industry while facilitating agricultural trade in poultry and poultry products.

Core Objectives:

- Objective 1: Support national avian health activities that include the National Poultry Improvement Plan (NPIP) and the live bird marketing system (LBMS) programs and other poultry disease issues that may occur
- Objective 2: Disease threat planning and response
- Objective 3: Communication with stakeholders
- Objective 4: Comprehensive disease surveillance in poultry
- Objective 5: Zoonotic disease prevention and response

##### b. Program Components

The Avian Health Program components are the NPIP (which includes mycoplasma and salmonella disease programs); the avian influenza (AI) prevention and control program (which includes the NPIP and LBMS AI programs); avian health and management studies; disease threat planning and response; comprehensive poultry disease surveillance; and zoonotic disease prevention and response. In this document, the AI activities for commercial poultry within the NPIP program will be discussed as part of the AI Prevention and Control Program.

##### NPIP

The NPIP was started in the early 1930s to coordinate State programs aimed at the elimination of pullorum disease (*Salmonella pullorum*) from commercial poultry. The NPIP program is a cooperative Industry-State-Federal voluntary program through which new diagnostic technology can effectively be applied to facilitate protection against disease incursion and to enhance the marketability of poultry and poultry products through interstate and international commerce. The provisions of the NPIP, both technical and management, are developed jointly by industry



members and State and Federal officials. This voluntary partnership has become the recognized manner in which U.S. poultry producers demonstrate the disease status of their birds and eggs for interstate and international shipment and sale. The NPIP is administered through a memorandum of understanding (MOU) between APHIS and official State agencies (OSA) in each of the 49 participating States.

The NPIP has certified 115 authorized laboratories nationwide to perform the various tests necessary to make sure that NPIP participating flocks and premises are properly maintained.

### **The AI Prevention and Control Program**

The goals of the Avian Health AI prevention and control program are to: (1) quickly diagnose, control, and prevent the spread of all H5 and H7 AI subtypes; (2) improve biosecurity, sanitation, and disease control in commercial poultry, LBMS and high-risk poultry sectors (auctions, small sales, flea markets, swap meets, farmers markets, feed stores, botanicas, custom exempt poultry facilities, and backyard or hobby flocks); and (3) minimize the effects of AI on the U.S. LBMS and commercial poultry industry.

Domestically, USDA continues to work to further strengthen safeguards currently in place to protect against the introduction of highly pathogenic avian influenza (HPAI) H5N1 in the United States. Surveillance in the LBMS and commercial poultry populations serves as an early warning system to rapidly detect and prevent spread of the disease, including zoonotic strains, in the United States. In the event of a detection of HPAI, State personnel will be the primary responders with additional assistance from their Federal counterparts in APHIS. APHIS and State animal health officials work cooperatively with the poultry industry to conduct surveillance at commercial production and breeding flocks, slaughter plants, live-bird markets, livestock auctions, flea markets swap meets, and poultry dealers/haulers/wholesalers.

The U.S. Department of Agriculture, APHIS, and VS national H5/H7 avian influenza surveillance plan has five objectives:

- Rapidly detect H5/H7 AI in domestic poultry populations.
- Ensure that low pathogenicity H5/H7 avian influenza strains are not circulating in poultry populations where they may spread and mutate into HPAI.
- Provide consistency with international surveillance guidelines for trade purposes.
- Protect public health through early detection and control of H5/H7 AI viruses.
- Demonstrate to trading partners and consumers that U.S. poultry is free of potentially dangerous influenza viruses.

APHIS has a number of domestic and international responsibilities in carrying out its avian health initiatives associated with AI, including preventing the entry of HPAI into the United States, providing technical leadership in animal health around the world, improving U.S. readiness to respond to an outbreak of AI, maintaining surveillance in various avian populations (including wild birds and birds in zoological

parks), and reducing the impact of AI outbreaks on the U.S. agricultural economy. VS coordinates these efforts with other APHIS units (including Wildlife Services, International Services), and others (including U.S. Customs and Border Protection) to support APHIS goals.

### **Avian Health and Management Studies**

VS conducts national studies on the health and management of United States domestic livestock populations through its National Animal Health Monitoring System (NAHMS) program. These studies are designed to meet the information needs of the industries associated with these commodities, as identified by the industry. NAHMS studies provide a snapshot of health and management practices in the United States.

### **Disease Threat Planning and Response**

Maintaining confidence in our ability to rapidly plan and respond to AI in poultry in the United States is critical. Natural and other disasters, foreign animal diseases (FADs) and emerging diseases can have devastating impacts on the U.S. poultry industry. Preparedness and response planning for disasters, FAD, and emerging disease incidents are imperative to effectively protect human and animal health, the food supply, the economy, and the environment. In order to safeguard the U.S. poultry industries, APHIS collaborates with local, State, Tribal, and Federal government agencies and food and agriculture industries to develop and implement avian influenza emergency preparedness and response capability and planning.

### **Zoonotic Disease Prevention and Response**

Zoonotic diseases are contagious diseases spread between animals and humans that are caused by viruses, bacteria, parasites, or fungi. These diseases are very common. Scientists estimate that more than 6 of every 10 infectious diseases in humans are spread from animals and that 75 percent of recently emerging infectious diseases affecting humans are of animal origin.

The avian health program supports detection, response, and recovery from zoonotic diseases (e.g., salmonella and AI). Some other non-H5/H7 influenza subtypes demonstrate zoonotic potential and are not reportable. However, those viruses would be identified through surveillance where our poultry industry partners would take action and control. The avian health program safeguards public health by reducing human exposure to any infection from these diseases. An indirect benefit is that this program supports consumer confidence in poultry and poultry products. Other collaborative efforts include surveillance, epidemiological investigations and the appropriate use of control/eradication programs for new and emerging zoonotic diseases associated with poultry.

## **Comprehensive Poultry Disease Surveillance**

To ensure the poultry industry maintains its competitiveness worldwide, it is essential to quickly detect and address endemic, emerging and foreign disease threats. This can be facilitated by implementing comprehensive surveillance. The objective of comprehensive surveillance is to optimize sampling strategies and to minimize the total costs to achieve surveillance goals. While avian health surveillance focuses on AI, salmonella, and mycoplasma, the development of broader surveillance plans will be based upon further analysis and stakeholder input. However, funding opportunities currently exist via cooperative agreement funding that allow States to address State level economic and zoonotic diseases of concern such as salmonellosis, mycoplasmosis, infectious bronchitis, very virulent infectious bursal disease, and infectious laryngotracheitis.

### **c. Funding**

Poultry health programs are funded through the avian health line. The total APHIS fiscal year (FY) 2014 avian health funding is \$52.3 million.

## **II. Value of the Avian Health Program**

The poultry health programs managed by APHIS are critical to support our poultry industry, and to mitigate risks to human health, the domestic food supply, and international trade.

Avian health programs prevent losses to the poultry industry and reduce the cost to the Federal government in responding to AI outbreaks. Evidence continues to demonstrate that H5/H7 LPAI viruses circulating in poultry populations can mutate into HPAI viruses. Prevention and control efforts through the AI program can help prevent these mutations and can limit losses from LPAI events. In 2002, millions of birds were depopulated under State and Federal authority in Virginia and Texas due to outbreaks of H7 LPAI (in Virginia) and H5 LPAI (in Texas). If the current AI program had been in place, the transmission of the H7 LPAI virus in Virginia may have been substantially reduced, and the overall cost to the poultry industry and the Federal Government would have been much less.

An effective AI program supports trade. The United States is the world's largest producer of poultry breeding stock and poultry meat and the second largest egg producer. We are the largest exporter of poultry breeding stock and turkey meat and second largest exporter of poultry meat. The U.S. poultry industry (primarily meat-type chickens, meat-type turkeys, and table egg-layers) is the second most valuable livestock industry at the farm level, second only to cattle and calf production. It accounted for \$38 billion in farm cash receipts in 2012. The meat-type chicken (broiler) industry is the largest and most valuable of the U.S. poultry subindustries. In 2012, farm cash receipts for broiler production were \$24.8 billion. The retail value of the U.S. broiler industry was \$48.7 billion. Eighteen percent of broiler production was exported at a value of \$4.4 billion. The United States is the world's largest producer and consumer of turkey meat. Farm-level value of the U.S.

turkey industry in 2012 was \$5.4 billion and the retail value was \$8.1 billion turkey meat exports were valued at \$585 million. At the farm level, the value of U.S. egg production, which includes table eggs and hatching eggs, was \$7.8 billion in 2012. The retail value of the U.S. table egg industry was \$12 billion. Value of exports for eggs and egg products in 2012 was \$341 million.

Primary breeders are the foundation of the \$38 plus billion poultry industry in the United States. The exports accounted for by the primary breeder companies in the United States are estimated at approximately \$250 million. Approximately 60 percent of the world's broiler genetics originated from U.S. primary breeders.

### III. FY 2014 Implementation

- a. **Objective 1:** Support national avian health activities that include the NPIP and LBMS programs and other disease issues that may occur.

**Strategy 1.1:** 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.

#### *FY 2014 Activities*

- Improve poultry production and breed-based genetics through testing for *Salmonella pullorum*, *S. gallinarum*, *S. enteritidis*, *Mycoplasma gallisepticum*, *M. synoviae*, and *M. meleagridis*.
- For NPIP, implement AI testing requirements as published in title 9 of the Code of Federal Regulations (CFR) parts 145, 146, and 147.
- For LBMS, implement AI testing requirements following guidelines in the APHIS Uniform Standards document.
- Indemnify affected flocks, where necessary as published in 9 CFR parts 56.
- Conduct epidemiological investigations on new and emerging diseases in poultry.

**Strategy 1.2:** Ensure NPIP authorized laboratories meet regulatory requirements.

#### *FY 2014 Activities*

- Examine each authorized laboratory proficiency test results.
- Verify that each laboratory has complied with the continuing education requirements found in 9 CFR to maintain their certification.
- Perform laboratory site visits.
- Review the annual laboratory audit reports.
- Begin discussions with the National Veterinary Services Laboratories (NVSL) to work towards providing proficiency tests for Plan diseases that do not currently have an official proficiency test.

**Strategy 1.3:** Coordinate NPIP diagnostic workshops.

***FY 2014 Activities***

- Conduct hands-on workshops for authorized NPIP laboratory officials for Salmonella Isolation and Identification, Diagnosis of Avian Mycoplasmas, and Diagnosis of Avian Influenza.

**b. Objective 2:** Disease threat planning and response.

**Strategy 2.1:** Ensure preparedness and communication.

***FY 2014 Activities***

- Work with States to review H5/H7 LPAI Initial State Response and Containment Plans (ISRCs) per 9 CFR 56. Current review by VS will be completed by December 31, 2014.
- Work with States to periodically review and update ISRCs every 5 years.
- Prepare and maintain operational response plans, policies, standard operating procedures, and other guidance documents to complement State plans. The H5/H7 LPAI LBMS Uniform Standards will be periodically reviewed and updated in coordination with the LBMS stakeholders working group, and new editions published.
- Engage in increased effective communication and decision-making processes related to current program issues with Federal, State, and industry officials.
- Evaluate and propose changes to the NPIP provisions that enhance salmonella, mycoplasma, and notifiable avian influenza surveillance.
- Exercise response plans, policies, and procedures with industry, State, Tribal, local, other Federal, and/or international entities, using a variety of methodologies including simulated outbreaks, to demonstrate and improve U.S. readiness and target capabilities to respond to an outbreak of AI.

**Strategy 2.2:** Prevent entry into the United States of AI via animals, animal products, and fomites.

***FY 2014 Activities***

- Maintain border port inspection capacity in cooperation with Customs and Border Protection.
- Work with Smuggling Interdiction and Trade Compliance and Investigative and Enforcement Services in investigations of import and interstate animal and product movement violations.
- Engage in collaborative efforts with other Federal agencies having importation jurisdiction including the department of Health and Human Services (HHS), Food and Drug Administration (FDA), the Department of Homeland Security (DHS), Custom and Border Protection (CBP), the Department of Interior (DOI) and the United States Fish and Wildlife Services (USFWS).

- Partner with the Food and Agricultural Organization (FAO) to implement and support the Crisis Management Center – Animal Health.
- Support U.S. Government effort to prevent pandemic influenza by providing technical leadership in avian health.
- Establish HPAI technical experts in priority countries for situational analysis, rapid response, and other technical support.
- Negotiate trade protocols and amend import requirements as appropriate to minimize the risk of introduction of HPAI.
- Support International Partnership for Avian and Pandemic Influenza.
- When requested, deploy HPAI technical experts to countries for situational analysis, rapid response, and other technical support.

**Strategy 2.3:** Appropriately respond and contain AI and other emerging poultry diseases (as needed).

***FY 2014 Activities***

- Respond and contain findings of AI when detected in NPIP flocks, backyard flocks, and the LBMS in the United States.
- Participate in or organize of AI emergency response exercises.
- Conduct exercises with the standing emergency poultry disease management committee of each participating State.

**Strategy 2.4:** Continuity of business, mitigation, and recovery

***FY 2014 Activities***

- Reduce the impact of AI outbreaks on the U.S. agricultural economy through continuity of business, mitigation, and business recovery planning.
- Develop, analyze, and bank scenarios using the North American Animal Disease Spread Model (NAADSM).
- Analyze the differences between NAADSM and other similar spatially explicit, stochastic, disease spread models.
- Implement a resource archive for organizing, managing, and sharing information useful for developing parameters used in epidemiological modeling.
- Continue to refine the National AI Surveillance plan, and evaluate risk factors for rapid surveillance refinements, including regions and compartments.
- Develop Secure Poultry Supply Plans (Table Eggs, Turkeys, and Broilers) for market continuity and movement of poultry commodities such as hatching eggs; day-old chicks and poults; table eggs and other egg industry products, as well as live poultry (meat-type turkeys, chickens and pullets) during an HPAI outbreak.
- Develop a central repository for risk assessment and disease risk data; provide a central web-based tool for industry, trading partners and other

government agencies to find provide scientific research-based evidence to help dispel any rumors or inaccurate information regarding disease risks.

- Raise awareness at the OIE regarding business continuity planning and control measures included in the HPAI emergency response plan to enable the management of live poultry from clinically healthy flocks located in a HPAI control area.

**Strategy 2.5:** Support the concept of primary breeder compartmentalization

***FY 2014 Activities***

- Review guidelines for the definition of *compartment*.
- Construct protocols and audit check lists for the compartments.
- Define company activities for maintenance of the compartment.
- Determine who will be performing auditing functions and what qualifications will be required.
- Organize training workshops for the auditors.
- Monitor compliance with all requirements with biennial audits performed by the OSA or Service.
- Coordinate meeting with primary breeders, National Import Export Services, and poultry staff to discuss negotiations with trading partners.

**c. Objective 3: Communication with Stakeholders**

**Strategy 3.1:** Host meetings with stakeholders.

***FY 2014 Activities***

- Host the NPIP Biennial conference, General Conference Committee meeting, and Technical Committee meeting.
- Host NPIP Official State Agency (OSA) Meeting.
- Host the annual LBMS working group business meeting for the NAI LBMS Prevention and Control Program.

**Strategy 3.2:** Conduct education and outreach.

***FY 2014 Activities***

- Increase awareness of and educate target audiences such as distributors/haulers/wholesalers, backyard flocks, hobby flocks, auctions, and small production flocks about AI.
- Locate backyard/nonconfinement/noncommercial poultry flocks and promote biosecurity practices and surveillance through education and outreach materials.

- Develop promotional and educational programs through pre-veterinary and veterinary classes, college animal/poultry science classes, 4-H Clubs, and FFA Chapters, all of which are eager recipients of biosecurity, AI prevention, and control information in order to enhance their personal poultry flocks as well as the industry.
- Educate the general public on the importance of the NPIP and the LBMS LPAI H5/H7 Control Program, and the benefits of being a participant.
- Identify areas where increased awareness is needed and provide/develop educational training activities, tools and materials to fill those gaps.
- Engage stakeholders to build trust and productive working relationships.
- Enhance Tribal consultation and networking activities.
- Implement an overarching strategy for communication and information sharing with stakeholders/partners.
- Provide education and outreach materials to increase awareness of avian influenza (LPAI and HPAI), flock biosecurity, maintenance of flock health, and disease recognition, diagnostic sampling and disease reporting. Whenever possible, existing USDA outreach materials should be used.
- Conduct outreach to noncommercial poultry enthusiasts about husbandry and disease risk in response to the increasing trend of backyard chickens through webinars.

**d. Objective 4: Comprehensive disease surveillance in poultry.**

**Strategy 4.1:** Surveillance and detection

***FY 2014 Activities***

- For the NPIP program:
  - Conduct NPIP certification testing for *Salmonella pullorum*, *Salmonella gallinarum* and *Salmonella enteritidis*.
  - Conduct NPIP certification testing for *Mycoplasma gallisepticum*, *Mycoplasma synoviae*, and *Mycoplasma meleagridis*.
  - Conduct active and passive surveillance to determine the AI status of commercial poultry participating in the NPIP.
  - Conduct the ELISA, AGID, USDA approved antigen capture immunoassays, and the RRT-PCR tests for avian influenza at authorized laboratories of the NPIP.
  - Submit and transport samples to NVSL.
  - Pay for laboratory costs for conducting AI clinical diagnostic surveillance, i.e., examining all submitted cases of unexplained respiratory disease, egg production drop, and mortality for avian influenza by an approved serological test, virus isolation and identification, an approved viral RNA and antigen detection test.
  - Purchase laboratory equipment necessary to conduct the official tests when there is an identifiable need.
  - Conduct epidemiological trace backs and trace forwards investigations.

- For the LBMS AI program:
  - Provide laboratory resources and personnel to inspect and collect samples to determine NAI status of poultry and environments and to support other LBMS surveillance activities in LBMS production flocks, dealers/haulers/wholesalers premises, auctions, swap meets, small sales, fairs and shows, flea markets, backyard/hobby flocks, public exhibitions, and at approximately 250 retail markets.
  - Conduct active and passive surveillance to determine the AI status in the LBMS sectors.
  - Assess clinical health status of birds in the live bird markets, production and distributor (dealers/haulers/wholesalers) premises that participate in this marketing system.
  - Audit and review live bird market records to ascertain compliance with State NAI control regulations.
  - Monitor live bird markets at least quarterly following removal of birds and thorough cleaning and disinfection.
  - Supervise proper cleaning and disinfection of NAI infected premises.
  - Issue quarantines and movement restrictions as appropriate and consistent with State regulations to control the spread and amplification of NAI.
  - Conduct poultry trace backs and epidemiology to determine the probable source of NAI infected birds.
  
- For both the NPIP and LBMS AI Program:
  - Conduct passive surveillance, including response to poultry mortalities and sick bird reports/calls in order to prevent and control H5 and H7 avian influenza (AI) subtypes from entering and spreading in commercial poultry, LBMS and backyard poultry flocks and causing significant economic damage.
  - Maintain laboratory capacity for detection of AI. This may be inclusive of: personnel, diagnostic kits, reagents, consumable laboratory supplies, equipment, training and proficiency testing for technicians.
  - Provide funding to laboratories to provide equipment and supplies for comprehensive surveillance, including bacteriology and pathology equipment, as well as diagnostic testing supplies for diseases of economic and zoonotic concern.
  - Provide additional funding to States in cooperative agreements to support comprehensive surveillance for diseases of economic and zoonotic concern including salmonella, mycoplasma, infectious bronchitis, very virulent infectious bursal disease, and infectious laryngotracheitis.
  - Conduct FAD and emergency disease investigation in avian species, and training of FADDs to conduct high quality FAD investigations and document them in real time in EMRS.

**Strategy 4.2:** Increase stakeholder awareness to determine diseases or syndromes of concern for which surveillance would be beneficial.

### *FY 2014 Activities*

- Provide opportunities via cooperative agreement funding that allow States to address economic, emerging and zoonotic disease of concern such as salmonellosis, infectious bronchitis, very virulent infectious bursal disease, infectious laryngotracheitis, virulent Newcastle disease, etc.
- Provide funding to laboratories to purchase equipment and supplies for comprehensive surveillance, including bacteriology and pathology equipment, as well as diagnostic testing supplies for diseases of economic and zoonotic concern.

#### **e. Objective 5: Zoonotic disease prevention and response.**

**Strategy 5.1:** The Avian Health Program partners with Tribal, State and local agencies and allied Federal agencies to establish strategic surveillance and response systems for zoonotic diseases related to poultry.

### *FY 2014 Activities*

- Work with One Health Coordination office (OHCO), the Centers for Disease Control (CDC), State and local public health agencies to develop Best Management Practices (BMPs) for mail-order hatcheries.
- Provide public education on zoonotic disease threats (such as HPAI, Salmonellosis, and virulent Newcastle disease).
- Develop and/or provide educational opportunities and/or materials that enhance understanding of zoonotic and emerging diseases/issues at the animal-human- environment interface and outline roles and responsibilities of all stakeholders and partners.
- Develop One Health partnerships within the State to identify needs and gaps
- Develop communication and response plans for events at the animal-human-environment interface.

## **IV. Out-year strategies and activities**

The NPIP program is built on more than 78 years of history of cooperation among Industry, State, and Federal partners. Current progress within the AI program is due, in large part, to the provision of personnel and other resources to establish control at various levels of the supply continuum. The AI prevention and control program requires ongoing State, Federal, and Industry cooperation. If poultry stakeholders do not participate and implement this voluntary program, this may lead to costly outbreaks of AI in the LBMS and commercial poultry industry compartments. As we continue these programs, however, APHIS will begin to examine ways in which these programs should be funded to provide greater flexibility in dealing with future disease challenges to maintain our

cooperative approach to an overall avian health program capable of addressing avian health issues beyond AI.

***FY 2015 Implementation***

- Continue performing activities as in 2014.
- Host the NPIP Official State Agency (OSA) Meeting.
- Conduct a LBMS Continuing Education Training Course.
- Begin implementation of compartmentalization.
- Evaluate response to any FY14 identified emerging poultry issue.

***FY 2016 Implementation***

- Continue performing activities as in FY 2014.
- Complete implementation of compartmentalization.
- Publish any necessary changes to NPIP based on changes approved at 2016 Biennial Conference.

***FY 2017 Implementation***

- Continue performing activities as in FY 2014.
- Host the NPIP Official State Agency (OSA) Meeting.
- Conduct a LBMS Continuing Education Training Course.
- Conduct NAHMS Selected Poultry Study.

***FY 2018 Implementation***

- Continue performing activities as in FY 2014.
- Publish any necessary changes to NPIP based on changes approved at the 2016 Biennial Conference.