

**National Advisory Committee on Meat and Poultry Inspection  
October 12-13, 2006**

**Avian Influenza (AI) Briefing Paper**

**Purpose**

This briefing paper summarizes FSIS efforts to prepare for the potential introduction of highly pathogenic Avian Influenza (HPAI) in the United States.

**Background**

Avian influenza (AI)—the bird flu—is a virus that infects wild birds and domestic poultry. There is a flu for birds just as there is for humans and, as with people, some forms of the flu are worse than others.

AI strains are divided into two groups based upon the ability of the virus to produce disease in poultry: low pathogenic avian influenza (LPAI) and highly pathogenic avian influenza (HPAI). LPAI, or “low path” avian influenza, naturally occurs in wild birds and can spread to domestic birds. In most cases it causes no signs of infection or only minor symptoms in birds. These strains of the virus pose little threat to human health. LPAI H5 and H7 strains have the potential to mutate into HPAI and are therefore closely monitored. HPAI, or “high path” avian influenza, is often fatal in chickens and turkeys. HPAI spreads more rapidly than LPAI and has a higher death rate in birds. HPAI H5N1 is the type rapidly spreading in some parts of the world.

AI is primarily a disease among birds, not people. Although the HPAI H5N1 virus does not usually infect people, more than 200 human cases have been reported since 2004. Most people who have become sick or died from HPAI H5N1 have had extensive, direct contact with infected poultry. Broad concerns about public health relate to the potential for the virus to mutate, or change into a form that could easily spread from person to person, a characteristic that could result in a human influenza pandemic. There is no evidence that this is occurring. Strains of AI that have been detected in U.S. poultry, including LPAI and HPAI, have caused no known human illnesses.

The chance of poultry infected with highly pathogenic avian influenza entering the human food supply is extremely low. Because of the rapid onset of symptoms and high death rate among poultry, it is highly unlikely a flock exposed to this virus would not show signs of the animal disease.

## **Discussion**

### ***Preparedness Planning***

FSIS is developing preparedness plans to respond quickly and decisively in the event of a detection in domestic flocks - working side by side with APHIS, local and state leaders, as well as the poultry industry. As part of these efforts, USDA is actively addressing the need to coordinate response actions in the event of an outbreak of HPAI H5N1 in the United States.

Recently, FSIS and the Animal and Plant Health Inspection Service (APHIS) conducted a tabletop exercise simulating an outbreak of HPAI H5N1 in commercial poultry, backyard flocks, live bird markets and wild bird populations. The exercise focused on the roles of federal, state and local government agencies, industry and consumer groups in collectively responding to an outbreak of this animal disease. By engaging with as many stakeholders who share FSIS' commitment to protecting public health through food safety as possible, we are making even greater advances in protecting this Nation's food supply.

FSIS continues to enhance Agency training and education efforts to ensure that personnel have the most up-to-date information regarding the avian influenza virus. FSIS public health veterinarians recently received updated training materials on foreign animal diseases including avian influenza.

FSIS in cooperation with Agricultural Research Service Southeastern Poultry Research Laboratory, developed the capacity to test poultry muscle from potentially exposed flocks using a diagnostic test (called RRT-PCR or real time reverse transcriptase polymerase chain reaction) to test for HPAI in raw poultry muscle products. FSIS is prepared to perform the RRT-PCR test in three field service laboratories and one food emergency response laboratory. FSIS is currently working to develop specific scenarios to determine when this test could be used. As part of the tabletop exercise FSIS testing procedures for poultry products were discussed.

FSIS is developing a farm-to-table probabilistic food safety risk assessment for HPAI from consumption of poultry, shell eggs and egg products. This risk assessment is being conducted in coordination with risk analysts from USDA's APHIS and the Department of Health and Human Service's Food and Drug Administration as part of the U.S. Interagency AI Risk Assessment Workgroup. This risk assessment will incorporate available data into a mathematical quantitative model to provide risk managers with a decision-support tool. This risk assessment will also be used to target risk communication messages; identify and prioritize research needs; and provide a framework useful for coordinating efforts with stakeholders. This risk assessment is currently underway and should be completed in winter 2007.

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