



Bird Flu and Food Safety

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Avian influenza A (AI)—or bird flu—is making headlines across America. The average person does not understand what bird flu is, or if it should be a worry for them. AI is not as simplistic as it may sound as there are many classifications, some of which are a concern and some are not. Certain types affect only animals, and others can potentially impact humans.

Wild birds are believed to be behind the current U.S. outbreak. Since mid-December, the USDA has been dealing with several highly pathogenic avian influenza (HPAI) 'H5'

cases. It started along the Pacific, Central and Mississippi flyways (migratory bird paths); however by the time this article is read, it will have spread across the U.S. The states not affected at this point are studying their emergency response plans.

Two types of AI are identified: **low pathogenic (LPAI)** and **highly pathogenic (HPAI)**. This difference refers to the ability of the virus to produce disease and mortality in chickens. AI viruses are classified by a combination of two groups of proteins:



HOW TO ENSURE YOUR FOODSERVICE OPERATION IS PROTECTED

- Hemagglutinin—H proteins of which there are 16 (H1-H16)
- Neuraminidase—N proteins of which there are 9 (N1-N9)

The primary strains detected are HPAI H5N8, novel HPAI H5N1, and HPAI H5N2.

H5N8: A threat to wild birds and poultry, but no human cases have been associated with this virus.

HPAI H5N1: “Asian” H5N1 is the type causing worldwide concern. High path AI spreads rapidly and is often fatal to chickens and turkeys. This has *not* been detected in the United States. Human illness has been reported.

LPAI H5N1: “North American” H5N1 is of less concern. It is common in wild birds and in most cases caused minor sickness to not noticeable signs of disease. It is rarely fatal in birds. LPAI H5N1 is not known to be a human health concern.

Mixed Origin HPAI: In the Pacific flyways, H5N8 virus mixed with North American AI virus, creating new mixed-origin viruses. These mixed origin viruses, H5N2 and a new H5N1 in the Pacific Flyways.

- HPAI H5N2 mixed strain has been found in North American Flyways. It mixes Eurasian H5 virus with North American N2 virus. No human cases have been associated with either the North American or the Eurasian lineages of HPAI H5N2 viruses. This seems to be the largest concern in the United States.
- New APAI H5N1 mixed strain virus is *not* the same as the Asian H5N1 virus found in Asia, Europe, and Africa that caused human illness. It mixes Asian HPAI H5 genes with LPAI North American N genes.

AI AND HUMAN HEALTH

According to the Centers for Disease Control and Prevention (CDC), current outbreaks of highly pathogenic avian influenza (HPAI) H5 viruses in U.S. domestic and wild birds have the potential to cause human infections. (<http://www.cdc.gov/flu/news/avian-h5-viruses.htm>) Though no human infections with these viruses have been reported at this point and the CDC believes *the risk of human infection is low*, similar H5 viruses have infected people in other parts of the world, and it's possible that human infections associated with these viruses may occur in the U.S.

Most human infections with similar HPAI viruses in other countries have occurred after prolonged and close contact with infected birds. Out of an abundance of caution, all federal and state agencies are monitoring the spread of AI in the United States. *As a general rule cautions should be taken. The CDC recommends that people should avoid wild birds and potentially infected domestic poultry; ob-*

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serve wild birds only from a distance, avoid contact with domestic birds (poultry) that appear ill or have died; and avoid contact with surfaces that appear to be contaminated with feces from wild or domestic birds.

ECONOMIC IMPACT

The largest concern with AI in the U.S. is its economic impact on the poultry and egg industry and consumers. Import/export bans and mass loss of poultry could result in large economic impacts on the industry. Once found in or around a farm, the entire population of birds is usually destroyed (culled). As a result, counties begin to ban poultry exports from those areas. Although farmers may have strong prevention measures in place, in many cases the farmer is at the mercy of migratory birds that may be flying overhead and excrete while over the farm. Already in 2015 millions of birds in the U.S. have been culled.

Consumers get concerned and lose faith in the industry, which could reduce consumption of eggs and poultry. Due to the economic impact to the farmer, prices of eggs and poultry will certainly rise.

AI AND FOOD SAFETY

The United States Department of Agriculture has provided the following questions and answers regarding food safety as it relates to poultry and egg consumption. (USDA, April 2015)

Q Can I get avian influenza from eating poultry or eggs?

A No. Poultry and eggs that are properly prepared and cooked are safe to eat. Proper food safety practices are important every day. In addition to proper processing, proper handling and cooking of poultry provides protection from viruses and bacteria, including avian influenza. As we remind consumers each and every day, there are four basic food safety steps to follow: CLEAN, SEPARATE, COOK, and CHILL.

Q How can USDA assure consumers that avian influenza infected meat will not enter the food supply?

A The chance of infected poultry entering the food chain is extremely low. As part of the USDA highly pathogenic avian influenza response plan, infected birds do not enter the food supply. Additionally, USDA's Food Safety and Inspection Service inspection program personnel are assigned to every federally inspected meat, poultry and egg product plant in America. All poultry products for public consumption are inspected for signs of disease both before and after slaughter. The "inspected for wholesomeness by the U.S. Department of Agriculture" seal ensures the poultry is free from visible signs of disease.

Q Does proper food handling prevent avian influenza?

A Avian influenza is not transmissible by eating properly prepared poultry, so properly prepared and cooked poultry and eggs are safe to eat. The chance of infected poultry or eggs entering the food chain is

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PROPERLY COOK POULTRY AND EGGS AND PREVENT CROSS-CONTAMINATION



extremely low because of the rapid onset of symptoms in poultry as well as the safeguards USDA has in place, which include testing of flocks, and federal inspection programs. USDA works to educate the public about safe food handling practices in response to numerous questions from the public about the human risk associated with avian influenza.

Q What does proper food handling mean?

A Proper handling and cooking of poultry provides protection against all avian influenza viruses, as it does against other viruses and bacteria, including *Salmonella* and *E.coli*. Safe food handling and preparation is important at all times. USDA continually reminds consumers to practice safe food handling and preparation every day.

Cooking poultry, eggs, and other poultry products to the proper temperature and preventing cross-contamination between raw and cooked food is the key to safety. You should:

- Wash hands with warm water and soap for at least 20 seconds before and after handling raw poultry and eggs;
- Prevent cross-contamination by keeping raw poultry and eggs away from other foods;
- After cutting raw meat, wash cutting board, knife, and countertops with hot, soapy water;
- Sanitize cutting boards by using a solution of 1 tablespoon chlorine bleach in 1 gallon of water;
- Use a food thermometer to ensure poultry has reached the safe internal temperature of at least 165 °F to kill foodborne germs that might be present, including the avian influenza viruses.

WHAT IS BEING DONE

What is being done to prevent and stop the spread of HPAI? A tremendous amount of work goes into controlling the spread of AI.

- Early detection is key to preventing the spread of the virus. Surveillance programs have been in place for many years, both in the US and overseas.
- The United States has the strongest AI surveillance program in the world. The USDA and poultry industry partners are actively looking for the disease.
- States have AI Emergency Response Plans in place.
- Commercial poultry flock testing is well established.
- Regulatory agencies immediately quarantine potentially infected flocks and collect samples for AI testing.
- Once a flock is confirmed positive, the regulatory agency and the USDA work with the producer/bird owner to create a flock plan. The plan includes appraisal, indemnity and depopulation of remaining birds, carcass disposal, and cleaning and disinfection of the premises.
- To meet federal requirements for HPAI response, the regulatory agency also conducts surveillance testing within 10 km of the affected farm and notifies all other poultry owners within a 20 km area.

Since AI is making front page news, it's important to know the facts. When your clients and administrators ask questions about bird flu, you'll have the knowledge and understanding to answer them. **E**

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