

Q's and A's: Avian Influenza

Q. What is avian influenza?

A. Avian influenza (AI) is a disease of poultry. AI viruses can be classified into low pathogenic and highly pathogenic forms based on the severity of the illness they cause. Most AI strains are classified as low pathogenic avian influenza (LPAI) typically causing little or no clinical signs in infected birds. In contrast, highly pathogenic avian influenza (HPAI) causes a severe and extremely contagious illness marked by nearly 100 percent mortality.

Q. How is the disease spread?

A. AI is primarily spread by direct contact between healthy birds and infected birds, and through indirect contact with contaminated equipment and materials. The virus is excreted through infected birds' feces and secretions from the nose, mouth, and eyes.

Contact with infected fecal material is the most important mode of bird-to-bird transmission. Wild ducks often introduce avian influenza virus (AIV) into domestic flocks raised on range or in open flight pens through fecal contamination. Within a poultry house, transfer of the HPAI virus between birds can also occur via airborne secretions. The spread of avian influenza between poultry premises almost always follows the movement of contaminated people and equipment. Mechanical transmission by vehicles and anything that can walk, crawl, or fly from farm to farm can and will occur. Rodents, insects (including flies) and wild birds (like sparrows) can act as vectors for AIV by carrying the virus on their bodies from place to place. AIV can also be found on the outer surfaces and inside of egg shells. Transfer of eggs is a potential means of AIV transmission. Airborne transmission of virus from farm to farm probably does not occur under usual circumstances.

Q. What symptoms do birds with AI demonstrate?

A. LPAI symptoms are typically mild. The presence of the disease may be demonstrated by decreased food consumption, respiratory signs (coughing and sneezing), and a decrease in egg production.

Birds that are affected with HPAI have a greater level of sickness and may exhibit one or more of the following clinical signs: sudden death without clinical signs; lack of energy and appetite; decreased egg

production; soft-shelled or misshapen eggs; swelling of the head, eyelids, comb, wattles, and hocks; purple discoloration of the wattles, combs, and legs; nasal discharge; coughing, sneezing; and incoordination and diarrhea.

Q. What should producers do if their birds appear to have signs of AI?

A. If birds exhibit clinical signs of HPAI or may have been exposed to birds with the disease, producers or bird owners should immediately notify Federal or State animal health officials.

Q. Is it possible for an LPAI strain to become highly pathogenic?

A. Yes. Serological testing is the preliminary screening method used for all AI viruses. Once an AI virus is detected, the virus is cultured to determine its subtype and pathogenicity. This subtyping is necessary because some low pathogenic subtypes have the capacity to mutate into more virulent strains.

Q. Is AI a reportable disease?

A. HPAI is considered a reportable disease by the World Organisation for Animal Health (OIE). The OIE considers LPAI to be a low risk disease and does not require it to be reported.

Q. Does AI threaten human health?

A. LPAI poses no threat to human health, however some strains of HPAI viruses can be infectious to people. Since mid-December 2003, a growing number of Asian countries have reported outbreaks of HPAI in chickens and ducks. The rapid spread of HPAI in 2004 is historically unprecedented and of growing concern for human health as well as for animal health. Of great concern to the World Health Organization (WHO) is the possibility that the present situation will give rise to human-to-human transmission and possibly cause an influenza pandemic in people, if the virus acquires human influenza genes.

Q. Does HPAI currently exist in the United States?

A. No, it does not.

Q. Are poultry products from Asia allowed into the United States?

A. No, on February 4, 2004, bird and bird products from Southeast Asian countries affected by the HPAI virus were banned from the United States. Processed avian products from these countries must have an

import permit and government certification of treatment. Pet and performing birds of U.S.–origin returning from Southeast Asia will be allowed into the United States with a permit and a 30–day quarantine in a U.S. Department of Agriculture (USDA) facility.

Q. What is USDA doing to avoid an HPAI outbreak in the United States?

A. To prevent HPAI from being introduced into the United States, USDA requires that all imported birds (poultry, pet birds, bird exhibited at zoos, and ratites) be quarantined and tested for this virus before entering the country. In addition to international import restrictions, USDA’s Animal and Plant Health Inspection Service (APHIS) and State veterinarians specially trained to diagnose foreign animal diseases regularly conduct field investigations of suspicious disease conditions. This surveillance is assisted by university personnel, State animal health officials, USDA–accredited veterinarians, and members of the industry who report suspicious cases. APHIS and State animal health officials work cooperatively with the poultry industry to conduct surveillance at breeding flocks, slaughter plants, live–bird markets, livestock auctions, and poultry dealers.

Q. What can poultry producers do to prevent an AI outbreak on their farms?

A. Poultry producers should strengthen biosecurity practices to prevent the introduction of AI into their flocks. The following are some sound biosecurity practices:

- Keep an “all–in, all–out” philosophy of flock management. Avoid skimming flocks—birds left behind are exposed to work crews and equipment that may carry poultry disease viruses. Process each lot of birds separately, and clean and disinfect poultry houses between flocks.
- Protect poultry flocks from coming into contact with wild or migratory birds. Keep poultry away from any source of water that may have been contaminated by wild birds.
- Permit only essential workers and vehicles to enter the farm.
- Provide clean clothing and disinfection facilities for employees.
- Thoroughly clean and disinfect equipment and vehicles (including tires and undercarriage) entering and leaving the farm.
- Do not loan to, or borrow equipment or vehicles from, other farms.
- Change footwear and clothing before working with your own flock after visiting another farm or live–bird market or avoid visiting another bird farm if possible.

- Do not bring birds from slaughter channels, especially those from live–bird markets, back to the farm.

If AI is detected, farms must be thoroughly cleaned and disinfected. AI is inactivated by heat and drying and it is also very sensitive to most disinfectants and detergents. The area to be disinfected must be clear of organic material, which greatly increases the resistance of avian influenza virus’ resistance to disinfection.

Q. What are the potential economic ramifications if an AI outbreak should occur in the United States?

A. An AI outbreak in the United States could potentially cost the U.S. poultry industry millions of dollars in losses. The 1983–84 HPAI outbreaks in the Northeast United States cost nearly \$65 million, and meant the destruction of 17 million birds.

In April 2002, an LPAI outbreak in Virginia affected 197 premises resulting in the depopulation of approximately 4.7 million birds.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, sexual orientation, or marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA’s TARGET Center at (202) 720–2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326–W, Whitten Building, 1400 Independence Avenue, SW, Washington, DC 20250–9410 or call (202) 720–5964 (voice and TDD). USDA is an equal opportunity provider and employer.