

# **Animal Disease Advisory on Avian Influenza for Iowa State University Farms**

## **What is avian influenza?**

Avian influenza is a viral disease that infects almost all species of birds. In December 2014, H5N2 highly pathogenic avian influenza (HPAI) virus entered the Pacific Northwest. It reached the Midwest in March 2015 and has infected numerous poultry operations in the Iowa, Minnesota, Missouri, Wisconsin, South Dakota, North Dakota and Nebraska. As of June 2015, it has been estimated that more than 48 million chickens and turkeys have been killed by the H5N2 virus or by eradication programs. There is no food safety risk for consumers of poultry and egg products. The Centers for Disease Control consider the risk to people to be low; no human infections have been detected.

## **How is H5N2 HPAI spreading in the U.S.?**

Migratory waterfowl are suspected carriers of the virus. They can become infected and show few clinical signs. It is not yet known how the virus is entering poultry buildings. Despite routine biosecurity precautions, it may be possible that it is carried into buildings on clothing or equipment. In addition, it may be airborne and possibly carried on dust or field debris.

## **How is avian influenza transmitted?**

*Fecal-oral transmission.* Avian influenza is excreted primarily through the feces and can survive in water for days. In the environment, it can survive for 30 to 35 days at 4 C (39.2 F) and for seven days at 20 C (68 F). *Aerosol transmission.* To a lesser degree, the virus can be transmitted by nasal and respiratory tract excretions. It is known to replicate in the upper respiratory tract.

## **How does HPAI spread between flocks?**

Equipment contaminated by feces and respiratory secretions containing the virus can readily transmit the disease. Potential carriers may include tires on feed-delivery vehicles, vehicles hauling birds to processing plants, flock owners, farm workers, utility workers, catching crews, vaccination crews, artificial insemination crews (for turkeys) or veterinarians. Fecal dust and contaminated feathers disseminated by air currents also may transmit the virus. Careful disposal of manure and dead birds is critical. Flock owners should not share equipment between farms.

## **What precautions can be taken to keep HPAI out of domestic poultry operations?**

*Clean and disinfect vehicles and equipment.* Clean manure spreaders, tractors, truck tires and undercarriages with a strong detergent, then apply disinfectant to kill disease-causing microorganisms that can linger on surfaces. Delivery trucks and other vehicles should carry a sprayer

of disinfectant in the cab so that tires and wheels can be disinfected before entering and leaving a farm. Also, vehicles can be taken through a car wash between farm visits to remove manure or fecal dust.

*Wear sanitized coveralls and boots.* Separate outer clothing should be assigned to individual houses. Wash and disinfect hands on entry and exit from houses. Foot pans containing phenolic disinfectant should be available at the entrance to all houses, and solutions should be changed daily. Drivers should carry a disinfectant spray (for example, Lysol) so shoes and floor mats can be disinfected when entering a vehicle.

*Keep out unnecessary visitors and equipment.* Allow only essential personnel onto farms. Secure entry gates and lock all poultry buildings. Avoid borrowing equipment. Don't visit other poultry farms or share employees.

*Avoid contact with game birds and migratory waterfowl.* Don't raise, keep or contact pet birds, ducks, geese or other game birds. Avoid visiting duck ponds and hunting waterfowl. Bird-proof houses, food stores and water tanks.

## **Who should be contacted if high mortality of unknown cause occurs?**

ISU Veterinary Diagnostic Laboratory, (515) 294-1950 or [isuvdl@iastate.edu](mailto:isuvdl@iastate.edu).

## **In response to the avian influenza crisis, how should ISU faculty and staff handle requests for tours to ISU Farms?**

Inform visitors they should not have visited other poultry units or premises for at least 48 hours before their tour at ISU. Inquire whether visitors have recently visited a foreign country. If they have recently been abroad, politely state: "Iowa State University has an animal disease advisory in place stating that those who have recently visited foreign countries will not be allowed on ISU farms with livestock or poultry before taking part in a precautionary waiting period until the global AI outbreak is under control." Those who have recently come to the U.S. or returned from a trip abroad should contact the College of Agriculture and Life Sciences' Global Programs office, (515) 294-8454, to participate in a five-day waiting period prior to visiting ISU farms.

*This advisory was prepared by the ISU College of Agriculture and Life Sciences. For more information: Mark Honeyman, ISU Research Farms, (515) 294-4621, or Ben Drescher, ISU Animal Science Farms, (515) 291-4725.*

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