

# Highly Pathogenic Avian Influenza (HPAI)

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## Avian Influenza (AI)

Avian influenza is caused by influenza type A virus that can infect poultry such as chickens, turkeys, quail, domestic ducks, geese, guinea fowl and wild birds. Infected birds shed the virus in their oral and nasal secretions and feces. The two types of virus are:

- **Highly Pathogenic Avian Influenza (HPAI):** Virus strains are extremely infectious, are often fatal to domestic poultry and can spread rapidly from flock to flock.
- **Low Pathogenicity Avian Influenza (LPAI):** Virus strains occur naturally in wild migratory waterfowl and shorebirds without causing illness. LPAI can infect domestic poultry with little or no signs of illness.

## Signs of HPAI in Poultry

- Sudden, unexplained death
- Decline in water consumption
- Decreased egg production and depression in layers
- Purple combs
- Quieter than normal
- Frequently laying down
- Swelling around eyelids, cobs, wattles
- Respiratory distress

## Signs of HPAI in Livestock

- Sudden drop in milk production
- Thicker, more concentrated milk (colostrum-like)
- Drop in feed intake
- Secondary infections, such as pneumonia and mastitis
- Lethargy
- Fever

## Procedures for Sick Poultry and Livestock

H5N1 strains have been detected in both wild and domestic mammals. Most often, these cases are occurring in predatory mammals that are known to consume wild birds. While the transmission rate from animals to humans is low, it is a zoonotic disease. To date, cases have been restricted to individuals working in close contact with infected poultry or livestock.

- Monitor your poultry and livestock for signs of illness.
- Report signs of H5N1 or any dead poultry or livestock.
  - Call your veterinarian to describe the signs in your poultry and livestock so together next steps can be taken.
  - If you cannot reach a local veterinarian, call the North Dakota State Board of Animal Health at 701-328-2655.
- **Avoid contact and do not transport sick or deceased poultry and livestock.**
- If you must handle wild birds or sick or dead poultry and livestock, minimize direct contact by wearing gloves and washing your hands with soap and water after touching any contaminated surfaces.
  - If available, wear respiratory protection, such as a medical facemask.
  - Discard the gloves and facemask after use.
  - Change your clothing before contact with healthy domestic poultry and livestock after handling wild birds

## Procedures for Positive Poultry Cases

USDA H5N1 response plans for federal and state partners are in place to respond quickly and decisively to outbreaks. The basic steps are:

- 1. Quarantine** — Restrict movement of poultry and poultry-moving equipment into and out of the control area.
- 2. Eradicate** — Depopulate the affected flock(s).
- 3. Monitor region** — Test wild and domestic birds in a broad area around the quarantine area.
- 4. Disinfect** — Kill the virus in the affected flock locations.
- 5. Test** — Confirm that the poultry farm is avian influenza virus free. The quarantine will be lifted by USDA Animal and Plant Health Inspection Service (APHIS) Veterinary Services (VS) and the State Veterinarian's Office after meeting requirements for flock type.

The USDA will reimburse farmers for birds that must be depopulated because of H5N1. Prior to assessing indemnity payments, USDA will ask farmers to verify they have a biosecurity plan in place for their farm(s). A biosecurity plan is required for commercial operations to receive indemnity payments.

## Procedures for Wild Birds

The primary carriers of avian influenza A are migratory wild birds. Avoid direct contact with wild birds and observe them only from a distance. Wild birds can be infected without showing symptoms of the infection.

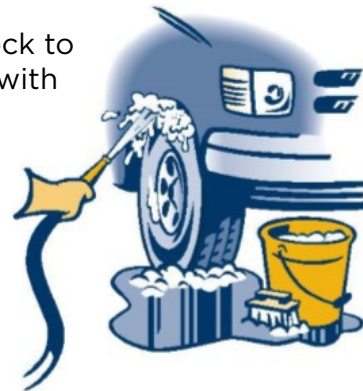
- Do not handle dead wild birds. Contact the North Dakota Game and Fish Department through their online form at [www.gf.nd.gov/mortality-report](http://www.gf.nd.gov/mortality-report).
- If you must handle the deceased bird, minimize direct contact by wearing gloves and washing your hands with soap and water after touching birds and any contaminated surfaces.
  - If available, wear respiratory protection, such as a medical facemask.
  - Discard the gloves and facemask.
  - Change your clothing before contact with healthy domestic poultry and birds after handling wild birds.
- Reduce the attractiveness for wild birds to stop at your place by cleaning up spilled feed around your domestic poultry and livestock housing.

# Biosecurity

Biosecurity is a set of practices or procedures employed to prevent the introduction or spread of infectious organisms, viruses, funguses, parasites and other microorganisms into a herd or flock.

Biosecurity can include measures with structural biosecurity like the construction and maintenance of coops, pens, poultry houses, family farms, commercial farms and other facilities to operational biosecurity that implements practices, procedures and policies for keeping your livestock healthy.

Biosecurity is a team effort. Everyone raising poultry or livestock should have biosecurity protocols in place to prepare for and prevent disease outbreaks. By practicing good biosecurity, the risk of people, animals, equipment or vehicles carrying infectious organisms decreases.



## Biosecurity Guidelines

- 1. Keep your distance.** Restrict access to your property and your poultry or livestock. Allow contact from people who care for your poultry or livestock but minimize visitors.
- 2. Minimize interactions.** Do not allow poultry and livestock to share water sources, feedstuffs or living environments with each other or wildlife.
- 3. Keep it clean.** Wear clean clothes, scrub your shoes with disinfectant and wash your hands thoroughly before and after caring for your poultry or livestock. Clean and disinfect tools and equipment that come into contact with your poultry or livestock or their feces. Appropriate personal protective equipment is recommended when working with poultry and livestock.
- 4. Don't haul disease home.** If you have been near other poultry or livestock or their owners, such as at feed stores, clean and disinfect car and truck tires. Keep new poultry and livestock separate from your flock or herd for 30 days.
- 5. Don't borrow disease from your neighbor.** Do not share lawn and garden equipment, tools or poultry or livestock supplies with your neighbor or other poultry or livestock owners.
- 6. Know the warning signs of infectious diseases.** Early detection is important to prevent the spread of disease. Monitor poultry and livestock health as you conduct chores each day.



Report sick poultry or livestock. Do not wait. If your poultry or livestock are sick or dying, **do not transport them.** Contact your local veterinarian or the North Dakota State Board of Animal Health at 701-328-2655.



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## Proper Disposal

USDA APHIS and state partners evaluate the disposal methods case by case based on factors such as the size of the flock, space requirements, associated costs, local conditions, and applicable laws and regulations.

## Food Safety

- Poultry is safe to eat if following proper handling and cooking techniques. The internal temperature of poultry and egg dishes should be 165 F when preparing to consume.
- Commercial dairy products are pasteurized and safe for consumption.
- Per Food and Drug Administration (FDA) guidance, raw milk, raw milk cheese and other raw dairy products should not be manufactured from asymptomatic cattle that have been exposed to HPAI.
- Products from poultry and livestock testing positive for HPAI are prohibited by law from entering the marketplace.

## Resources

- N.D. State Board of Animal Health
- NDSU Extension
- N.D. Game and Fish Department
- USDA Animal and Plant Health Inspection Service



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