

HPAI:

Highly Pathogenic Avian Influenza

Highly pathogenic avian influenza, or HPAI, is a rapidly spreading viral disease that can infect many types of birds. Avian influenza, often called avian flu or bird flu, can be common, but some strains are highly pathogenic, which means they are more deadly. Introduced by migrating wild birds, HPAI can spread through spring migration and affect **all** domestic poultry — small and backyard flocks as well as commercial industries.

Poultry with HPAI **do not** survive the illness. Vaccines for HPAI are not readily available.

Signs of Avian Influenza

- Coughing and sneezing
- Difficulty breathing
- Extreme depression
- Lack of energy
- Decrease in feed or water intake
- Swelling or purple discoloration of head, eyelids, comb, wattle and legs
- Decrease in egg production
- Sudden unexplained death

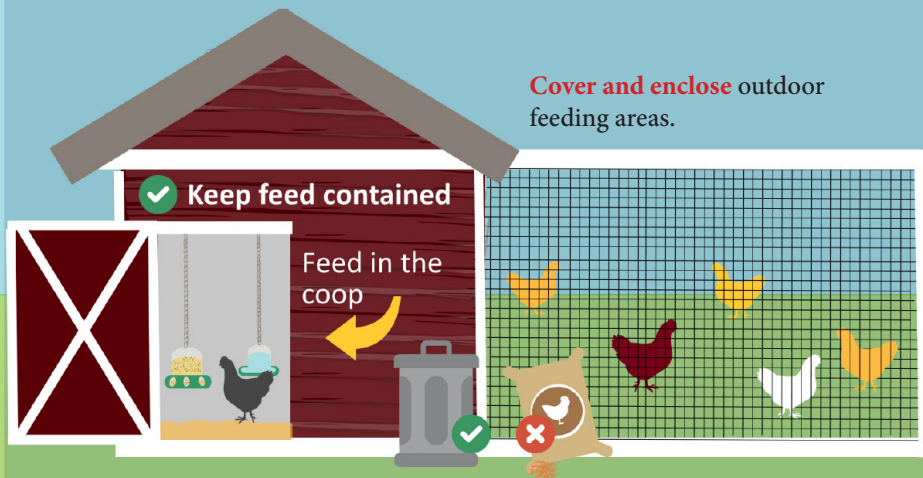
Biosecurity is your best option to prevent HPAI from entering your small or backyard poultry flock.

Here is what you can do:

Protect Your Small Flock from Avian Influenza

1

Avoid attracting wild birds and waterfowl to your home or farm. Song birds, sparrows, starlings, etc. are **low risk**.



- Clean up** feed spills.
- Reduce** puddles and standing water.
- Avoid** visiting ponds and streams, especially with pets.
- Do not** move birds from farm to farm.
- Isolate** new birds.

2

Limit or **halt** travel with your birds to sales, shows and swaps.

Ensure you have clean hands, clothes, and footwear before handling your birds if you attend events. **Do not** allow others to handle your birds.



3

Limit your birds' visitors.

If someone must visit your birds: discuss where they have been. Have them wash their hands and wear clean clothes and footwear.



Call your veterinarian if your flock shows signs of influenza or you suspect exposure. No veterinarian? Call the Kansas Department of Agriculture's Division of Animal Health at 785-564-6601.



Avian Influenza Findings Emphasize the Need for Good Biosecurity

As part of its safeguarding mission, the U.S. Department of Agriculture's (USDA) Animal and Plant Health Inspection Service (APHIS) protects the health of our Nation's livestock and poultry. We respond to major animal disease events, helping to keep dangerous diseases from spreading. We also work to reduce the economic impact of disease events.

Avian influenza is a viral disease that can infect wild birds (such as ducks, gulls, and shorebirds) and domestic poultry (such as chickens, turkeys, ducks, and geese). There is a flu for birds just as there is for people—and, as with people, some forms of the flu are worse than others. Highly pathogenic avian influenza (HPAI) can spread fast and quickly kill chickens and turkeys. Wild birds, however, can carry HPAI viruses without appearing sick.

The United States experienced a significant outbreak of HPAI in 2014–2015, affecting 21 States and leading to the destruction of almost 50 million birds. Response costs alone were almost \$1 billion, and that does not include the economic impact on industry. We must do everything we can to prevent future outbreaks.

Biosecurity Is Key

Anyone who owns or works with poultry—whether on a commercial farm, in the wild, or at a hobby/backyard farm—should take proper steps to keep HPAI from entering their flocks. The best way to protect your birds is to follow good biosecurity. Even if you are already familiar with biosecurity, it is always good to double-check your practices. You are the best protection your birds have!

Commercial producers should complete this self-assessment of biosecurity practices: www.uspoultry.org/animal_husbandry/assessment.cfm. USDA partnered with States and industry to develop this assessment as an aid for all commercial poultry owners in understanding and putting in place enhanced

biosecurity measures. Your industry organization can also point you to further resources.

If you hunt or handle wild birds, see APHIS' factsheet for hunters at www.aphis.usda.gov/publications/animal_health/2015/fsc_hpai_hunters.pdf.

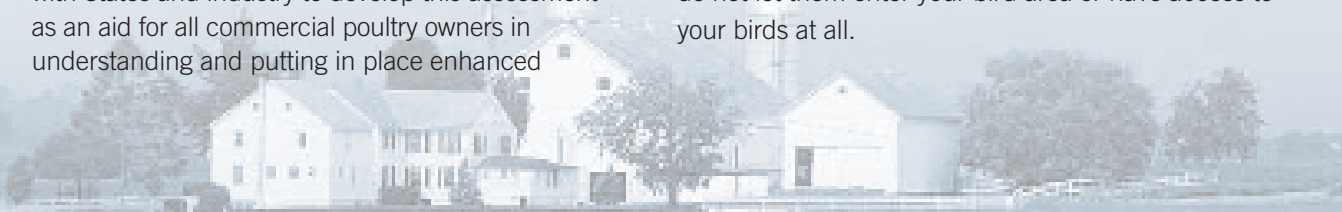
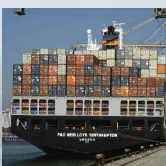
Backyard poultry owners can follow six simple steps for biosecurity. Make them part of your routine to lower the risk that disease will enter your flock and spread via soil, droppings, and debris.

1. Keep Your Distance.

Restrict access to your property and your birds. Consider fencing off the area where your birds are to form a barrier between “clean” and “dirty” areas. The clean area is the immediate area completely surrounding your birds. The dirty (or “buffer”) area is the immediate adjacent area—consider this area to be infected with bacteria and viruses, even if your birds appear healthy and disease-free.

Create distance and use barriers to prevent contact between your birds and wild birds. Wild birds, especially ducks and geese, should not have contact with your flock because they can carry disease-causing viruses and bacteria. If your birds are outdoors, try to keep them in a screened coop. Also, protect your birds' food and water from wild birds or any other wild animals that could bring disease to them.

Allow only people who take care of your birds to come into contact with them. Your caretakers should not attend bird shows or other events and places where birds are present. If visitors want to see your birds, be sure they wash up first and clean their shoes. Better yet, keep clean boots or shoe covers for them to wear. If your visitors have birds of their own, do not let them enter your bird area or have access to your birds at all.



2. Keep It Clean.

Bacteria and viruses can be picked up on shoes and clothing and moved from one place to another. Since this can make your birds sick, you need to protect their home by keeping it clean.

To keep your birds “disease-free,” have a pair of shoes and a set of clothes to wear only around your birds. Many people store these clean clothes in a covered pail at the entrance to their bird area. Or, clean and disinfect your shoes and launder your clothes before you check on or work with your birds.

Scrubbing your shoes with a long-handled scrub brush and disinfectant will remove droppings, mud, or debris. Wash your clothes with laundry detergent. Wash your hands thoroughly with soap and water before entering your bird area.

Keep cages clean and change food and water daily. Clean and disinfect equipment that comes in contact with your birds or their droppings. That includes tools such as feed scoops, shovels, rakes, and brooms. All manure must be removed before disinfectant can work, so clean surfaces with soap and water first.

Properly dispose of dead birds by burial or incineration or take them to a landfill. Check on local ordinances for acceptable disposal methods.

3. Don't Haul Disease Home.

Car and truck tires, poultry cages, and equipment can all harbor organisms that cause disease. If you travel to a place where other birds are present, or even to the feed store, be sure to clean and disinfect these items before you return to your property.

Taking some of your birds to a fair or exhibition? Keep those birds separated from the rest of your flock and watch them for at least 3 weeks after the event to make sure they did not pick up a disease. New birds should be kept separate from your flock for at least 30 days before putting them with the rest of your birds. To prevent disease, it is best not to mix young and old birds or birds from different species or different sources.

4. Don't Borrow Disease From Your Neighbor.

Do not share birds, lawn and garden equipment, tools, or poultry supplies with your neighbors or other bird owners. If you do bring equipment or other items home, clean and disinfect them before they reach your property. Also, remember to clean and disinfect borrowed items before returning them.

Never share items such as wooden pallets or cardboard egg cartons because they are porous and cannot be adequately cleaned and disinfected.

5. Know the Warning Signs of Infectious Bird Diseases.

Early detection is very important to prevent the spread of disease. Here's what to look for:

- Sudden death without any signs
- Lack of energy and appetite
- Decreased egg production
- Soft-shelled or misshapen eggs
- Swelling of the eyelids, comb, wattles, and shanks
- Purple discoloration of the wattles, comb, and legs
- Gasping for air (difficulty breathing)
- Nasal discharge (runny nose)
- Coughing, sneezing
- Twisting of the head and neck (torticollis)
- Stumbling or falling down
- Diarrhea

6. Report Sick Birds.

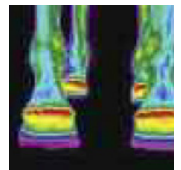
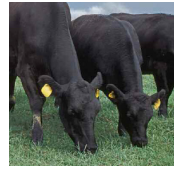
Don't wait. If your birds are sick or dying, contact your local cooperative extension office/agent, your veterinarian, the State veterinarian, or your State animal/poultry diagnostic laboratory.

Or, call USDA toll free at **1-866-536-7593**, and we'll put you in touch with a local contact. There is no charge for a disease investigation, if one is needed. Early reporting is important to protect the health of your birds.

To learn more, go to:

<http://healthybirds.aphis.usda.gov>

www.aphis.usda.gov/publications (filter view by “Avian Influenza” and “Bird Biosecurity”)





✓ Checklist: Tips To Help Keep Your Flocks Healthy

This checklist is a general guide to practicing good biosecurity, but if you have a site-specific biosecurity plan, please follow it. Commercial growers should be sure their site-specific plans follow the National Poultry Improvement Plan biosecurity principles.

- ☐ **Understand what poses a disease risk:** it's not just the wild birds and pests themselves. Feathers, nests, feces, and other organic materials can also carry disease. These items can come in contact with your flock through poultry enclosures, feed and water supplies, and even vehicles at your property.
- ☐ **Check coops, pens, and poultry houses regularly** for areas that allow birds to perch, nest, or enter. These include extended roof eaves, rooftop ventilation, overhead wires, torn screens, holes, and broken door openings. Concrete aprons around building walls deter burrowing animals.
- ☐ **Sweep away old nests before nesting season**—birds will return to the same nests year after year.
- ☐ **Clean and disinfect poultry enclosures.** This includes removing soiled litter and throwing it away. Sick birds can easily contaminate straw and other bedding.
- ☐ **Don't give wild birds, rodents, and insects a free lunch!** Remove spilled or uneaten feed right away, and make sure feed storage units are secure and free of holes.
- ☐ **Protect your flock's water supply.** Make sure wild birds, rodents, and other pests can't access it. And if you can, use a municipal water supply or treated well water so you know it's clean.
- ☐ **Don't walk through or drive trucks, tractors, or equipment** in areas where waterfowl or other wildlife feces may be. If you can't avoid this, clean your shoes, vehicle, and/or equipment thoroughly to prevent bringing disease agents back to your flock.
- ☐ **Know the warning signs of poultry disease,** like changes in how much your birds eat or drink, increased deaths in your flock, or general malaise.

Be sure to:

Find out when wild bird migration season is in your area. Be extra careful during this time to protect your flock from infectious diseases. If you find native wild bird nests with eggs or young in them, contact your cooperative extension service.

For more information about how to keep your flocks healthy, follow **Defend the Flock** on **Facebook** and **Twitter** and visit www.aphis.usda.gov/animalhealth/defendtheflock.





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- ☐ **Wear personal protective equipment** or clothing and shoes that you only use when caring for your poultry. This includes boot covers or boots that can be disinfected. Change into fresh protective gear between poultry houses or coops.
- ☐ **Enclosures must be empty for a thorough cleaning.** If you have a poultry house, wait until the house is empty to start the cleaning process. If you have a coop or other type of enclosure, move the birds to a separate area before cleaning.
- ☐ **Remove all litter, manure, and other debris.**
- ☐ **“Dry” clean all areas**—brush, scrape, and shovel off manure, feathers, and other materials. Disinfectant will not penetrate organic matter or caked-on dirt.
- ☐ **“Wet” clean all surfaces**—scrub with water and detergent. Work from top to bottom and back to front.
- ☐ **Rinse all surfaces carefully with water.**
- ☐ **Apply disinfectant** according to the directions on the label. Be sure to use a disinfectant that is registered by the U.S. Environmental Protection Agency (EPA) and indicates that it is effective against avian influenza and other poultry diseases.
- ☐ **Leave the enclosure empty** until it is completely dry. Use fans and/or open doors and windows to help speed the drying process. Wet surfaces can be harmful to poultry.
- ☐ **When you’re done, remove and discard** your protective gear. If using dedicated clothing and boots, change clothing and clean and disinfect your boots.
- ☐ **Wash your hands thoroughly** with soap and water. Wash and dry your dedicated clothing.

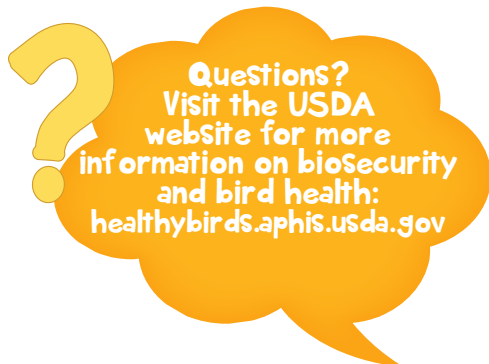
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PREVENTION FOR YOUR BIRDS: Biosecurity Steps

1. **Keep your distance.** Limit contact between your birds and wild birds.
2. **Keep it clean.** Always wash your hands before and after being near your birds. You can pick up germs from anything in the birds' living area.
3. **Don't bring disease home.** Isolate new birds for at least 30 days and keep birds who have been to an exhibition separated from the flock for two weeks after the event.
4. **Don't borrow disease from your neighbors.** Don't share equipment or supplies with other poultry owners.
5. **Know the warning signs.** Check your birds and let an adult know if something is wrong.
6. **Report sick birds.** If your birds are sick or dying, ask an adult to call your extension office, veterinarian or the state veterinarian.



SAFE HANDLING

Poultry, including chickens, ducks, geese and turkeys, carry many germs, like bacteria and viruses. One bacteria they carry is salmonella – which is zoonotic, meaning it can cause illness in people. Disease can spread to people after touching birds or anything in the area where birds live.

Safety Tips for You

- Always **wash your hands** with soap and water after touching birds or anything in the birds' living area.
- Don't eat or drink around poultry.
- Don't let poultry live inside your house, especially in the areas where you cook or eat.
- Keep the shoes you wear around poultry outside to avoid bringing germs into the house.
- Don't kiss your birds or snuggle them to your face.
- Clean poultry equipment outdoors.
- Refrigerate eggs after collection and cook them thoroughly before eating.



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POULTRY TESTING

For Avian Influenza and Pullorum

AVIAN INFLUENZA

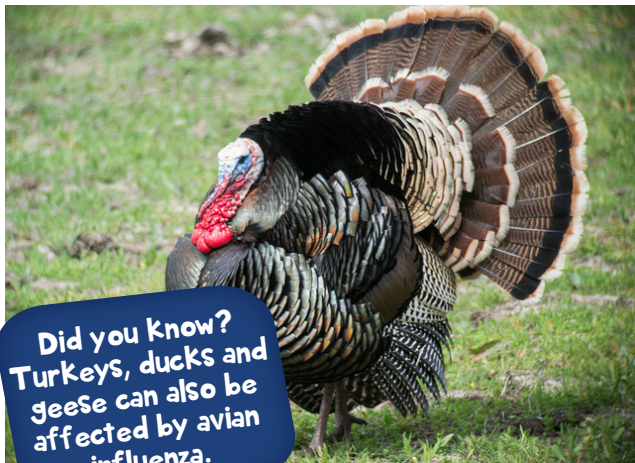
Avian influenza, or bird flu, is a respiratory disease in birds. There are two main types of bird flu:

1. **Highly Pathogenic Avian Influenza (HPAI)** is severe, easily spread and can cause illness in other species.
2. **Low Pathogenic Avian Influenza (LPAI)** is mild and birds may seem healthy, but it can mutate to become HPAI.

Bird flu can be spread from contact with sick birds, migratory waterfowl, or even from people and equipment.

Symptoms of avian influenza:

- Lack of energy or appetite
- Lower egg production
- Swelling of the head, comb, eyelids, wattles or legs
- Purple coloring of the wattles, comb or legs
- Diarrhea
- Runny nose, coughing or sneezing



Did you know?
Turkeys, ducks and geese can also be affected by avian influenza.



Wild birds can spread disease to your poultry. Wild birds often don't show any signs of being sick, but can still spread disease. Be sure to have a secure pen to keep your birds safe.

PULLORUM

Salmonella is a bacteria that causes the disease pullorum and can result in the death of many chicks.

Birds most commonly get sick by eating eggs infected with the pullorum bacteria. Other methods include contact with infected birds and dirty food or water.

Signs of disease in young poultry:

- Huddling near heat source
- Weakness
- White diarrhea
- White fecal paste around vent

Adult poultry may carry the pullorum disease without showing any clinical signs, which may result in death.

Why test?

Avian influenza and pullorum tests help veterinarians find sick birds earlier, prevent the spread of disease and protect other birds. If birds get sick with avian influenza or pullorum, they could die.

Testing is important to guarantee birds are healthy before going to exhibitions. This prevents pullorum and avian influenza from spreading to other birds and keeps your poultry healthy and safe.

While the U.S. commercial poultry facilities are pullorum free, this disease may still be present in backyard flocks.

In an outbreak of poultry disease, many birds die. Limiting the sale of birds and eggs helps stop the spread of disease.



Chicks are at high risk for disease. Be sure to purchase birds and eggs for hatching from a National Poultry Improvement Plan certified flock.