

# Backyard Biosecurity Is the Best Defense Against Avian Influenza



The threat of a serious disease outbreak such as avian influenza (AI) or infectious laryngotracheitis (ILT) should raise every backyard poultry owner's awareness of the importance of having and maintaining a strong biosecurity program. Biosecurity means doing all you can to prevent an infectious disease from being carried onto your farm by people, pets, wild animals, equipment, or vehicles. It also means taking steps to reduce the likelihood that disease (should it occur) will leave your property. Backyard biosecurity provides a measure of protection for you, other backyard poultry keepers, and the multi-billion dollar commercial poultry and egg industry in Mississippi. While you cannot control anyone else's biosecurity practices, you can take steps to ensure that you are not putting your chickens, other backyard flocks, or the commercial industry at risk.

## Reason for Concern

Avian influenza is currently very much a concern for backyard poultry keepers and the commercial poultry industry in Mississippi due to recent confirmed reports of both high path and low path AI cases in Tennessee and confirmed low path AI cases in Alabama. Many strains of AI virus exist worldwide that are capable of causing various degrees of illness in poultry (especially chickens and turkeys). Wild birds (especially migratory waterfowl, including ducks and geese) are carriers for AI viruses but often show no symptoms or mortality. Domestic poultry, however, are very susceptible to AI. Most AI viruses are classified as low-pathogenic avian influenza (LPAI) and cause only mild disease in poultry. However, some viruses are classified as high-pathogenic avian influenza (HPAI) and are much more dangerous with severe symptoms and high mortality rates. HPAI is an extremely infectious and fatal form of the disease, with death rates as high as 95–100 percent.

Possible signs of HPAI in a flock include decreased energy and appetite; decreased egg production; abnormal egg shape; respiratory distress; diarrhea; swelling or purple discoloration of the comb, head, eyelids, wattles, and legs; depression; lethargy; twisting of the head or neck; and increased mortality. Keep in mind that these signs are not restricted to AI. Therefore, it is important to know your chickens. Spend time with them and learn their personalities. You will then be able to easily recognize when something isn't quite right. Promptly recognizing disease symptoms and reporting numerous sick or dying birds is a critical step in containing a devastating disease outbreak.

The current cases in Tennessee and Alabama are believed to have originated in wild ducks and geese, and, unlike the AI outbreak of 2014–15, are believed to be solely of North American origin. Mississippi, Alabama, and Tennessee are all considered to be in the Mississippi Flyway, one of the four major flyways in the United States. Infected ducks and geese can shed the AI virus in secretions from the mouth, nostrils, and eyes and can also excrete the virus in their droppings. The most common means of bird-to-bird transmission is contact with contaminated droppings, although airborne secretions are another important means of transmission, especially in commercial poultry houses. In many cases, the spread of AI between poultry facilities can be traced to the movement of infected birds or contaminated people and equipment (including boots, clothing, and vehicles). In other words, a **breach in biosecurity on someone's part is often how an outbreak gets started.**



## Biosecurity Is Critical

Practicing biosecurity is the key to preventing avian influenza. Key steps to a sound biosecurity program include:

- 1) isolate your birds from all other birds (wild and domestic),
- 2) ensure proper sanitation,
- 3) control and limit traffic near your birds,
- 4) recognize disease symptoms, and
- 5) know whom to call if you have a sudden increase in sickness and mortality.

## Isolate Your Birds

- Post "No Visitors" or "Restricted Area" signs at road entrances.
- Do not visit other individuals who have backyard poultry or commercial poultry flocks.
- Minimize or eliminate contact with other poultry at swap meets, fairs, chicken auctions, etc.
- Prevent wild birds (especially waterfowl) from coming in contact with your birds.
- Keep the grass cut, and remove possible shelter and food sources to discourage animals from coming near your birds.
- Treat any dead wild bird as if were infectious, and dispose of it quickly. Wash your hands after disposal.

## Sanitation

- Mud, dirt, manure, or any organic material should be removed from boots before disinfecting them. This will ensure adequate contact time with disinfectant.
- Clean and disinfect all equipment entering and leaving the property. Use plastic or metal poultry containers, not wood. Wood is hard to disinfect.
- Properly dispose of used bedding material and dead birds.

## Traffic Flow

- Limit and minimize the traffic flow near your birds. Avoid visiting other backyard poultry pens, swap meets, chicken auctions, livestock sales, etc. Avoid moving equipment from place to place. If this is unavoidable, make sure it is cleaned and disinfected before it leaves and before it returns.
- If you have multiple-age birds, always work from youngest to oldest to lessen the risk to younger birds.
- As much as possible, keep everyone away from your birds except the caretakers.
- Dedicate footwear and clothing to be worn only near the chickens, or use clean, protective plastic boots, disposable hair nets, and disposable coveralls when working your birds.
- Ask any visitors if they have recently been around other poultry. If so, do not let them near your birds.
- Properly manage mortality disposal in a timely manner.

## Disease Symptoms

- Sneezing
- Coughing
- Watery eyes
- Nasal discharge
- Twisted neck
- Swollen sinuses
- Decreased feed and water intake
- Dehydration
- Decreased egg production
- Misshapen eggs
- Decreased fertility and hatchability
- Depression
- Huddling
- Lethargy
- Purple discoloration of the comb, head, eyelids, wattles, and legs
- Increased mortality

## Sources of Help

- Your local county Extension agent
- Your local veterinarian
- Mississippi State University Poultry Science Department (662-325-3416); ask for a poultry Extension specialist
- Mississippi Veterinary Research and Diagnostic Lab (601-420-4700)
- Mississippi Board of Animal Health (601-359-1170) or the animal disaster hotline (1-888-722-3106)

There is no need to panic if what you are seeing is normal, everyday mortalities, where you may lose a bird every now and then. If you have a problem that seems to be chronic and has lasted more than a week, this will not be AI. If you had a problem but the flock eventually got better, this was not AI. If one bird has been sick a few days but all the others still seem to be fine, this will not be AI. If you see a decrease in egg production but the flock otherwise appears to be healthy, this is likely not AI. However, if you have the sudden unexplained death of multiple birds or more than 10 percent of the flock appears to be showing symptoms all at once, let someone know and you will be provided assistance.

**Biosecurity is the best and most effective weapon** we have against the introduction of AI into Mississippi. Much of biosecurity is simply common sense. If you visit the feed store, co-op, cafe, coffee shop, or any other place that other chicken folks hang out, do not go home and visit your chickens without first changing boots and clothes and washing your hands. Consider mixing some disinfectant such as quaternary ammonia in a 3-gallon sprayer and keeping the sprayer in your vehicle to disinfect your tires and undercarriage whenever returning to the farm. Consider a container of disinfectant (dry bleach works well) to step into immediately before stepping into your chicken pen. It is impossible to be too careful at this point. A good biosecurity program is a vital best management practice for all backyard flock owners. Following sound biosecurity practices can help reduce the risk of introducing avian influenza or other infectious diseases onto your farm. This will help ensure the safety of both backyard and commercial chickens across Mississippi.

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