

Sudden Illness in Dairy Cattle

HPAI Updates and What you can do to Protect your Herd

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Summary of HPAI in Dairy Herds

In March 2024 symptoms of an unidentified illness were discovered in dairy cattle in the Texas panhandle. These symptoms were noted across herds, but, collectively, were not indicative of any known disorder or illness. Animal health authorities from both the state of TX and the USDA began investigating the situation and found that symptoms may have appeared as early as January 2024 in these herds.

After extensive testing of wild bird and cow tissue samples, milk samples, and other samples taken from these farms, highly pathogenic avian influenza (HPAI) was found in dead wild birds found on site and later also in milk and tissue samples from the affected cows. While HPAI has been identified, it may not be the only cause of these symptoms. Since then, cows and herds in 8 states (Texas, New Mexico, Kansas, South Dakota, Michigan, Ohio, and North Carolina) have tested positive for HPAI, but not all animals have been symptomatic.

HPAI is a known pathogen in wild, migratory birds and can infect domestic poultry as well. Strains of HPAI have been known to also infect other species, including humans, but is rarely reported as fatal outside of birds.

As of April 12, 2024, the [USDA-APHIS updated their information and guidance on HPAI](#) in dairy cattle. While the original source of contamination in TX is still unknown, wild birds were identified as the carriers of HPAI.

Some other important updates from USDA-APHIS are:

1. HPAI in dairy cattle is believed to spread from cow to cow. The largest concentration of the virus has been found in unpasteurized (raw) milk and is assumed to be the greatest opportunity for transmission. Thus, biosecurity protocols in and around the milking parlor should be increased. The [Secure Milk Supply](#) details the best management practices for biosecurity on a dairy farm.
2. Genetic testing of the virus has confirmed that recent infections in poultry houses in two states are also linked to the virus found in dairy cattle. Therefore, biosecurity protocols at both dairy and poultry facilities should be increased. People who work in both facilities or share living space with others who do, should increase biosecurity measures and reduce cross contamination.

If you have noticed the following symptoms in your cows:

- Sudden drop in feed intake
- Sudden drop in milk production
- Change in milk consistency (more colostrum like)
- Fever or respiratory distress

Call your veterinarian and report these symptoms

**NCDA&CS Veterinary
Division
919-707-3250**

Frequently Asked (and answered) Questions:

1. What should I be looking for in my cattle?

The majority of the cows affected appear to be high producing older cows, in mid lactation. However, any combination of the following symptoms in any cattle should be reported to your veterinarian.

- Sudden drop in feed intake
- Sudden drop in milk yields
- Decreased rumination activity (for cows wearing activity collars)
- Change in milk consistency to more “colostrum like”. Low volume, thick, yellowish color milk.
- Fever
- Dehydration

2. What should I do if I see these symptoms in my cows?

Contact your veterinarian and your local state health veterinarian or the NCDA&CS State Veterinary Office.

Dr. Michael Martin (State Veterinarian)

Dr. Catherine Harris (Director Livestock Health)

NCDA&CS Livestock Health Contact:
Phone: 919-707-3250 Fax: 919-733-2277

3. Should I quarantine my cows?

The NCDA&CS State Veterinarian office has recommended that no cattle from affected states (Texas, New Mexico, Kansas, Idaho, Ohio, Michigan, and North Carolina) should be brought into NC. Additionally, no cattle from herds inside NC, who are showing symptoms should be moved.

As you make culling decisions or move cows between locations, be aware of their health status. If you **have to** move

cattle around during this time, it is recommended that you take milk samples before moving them. If necessary, those samples could be tested in the case that any cows begin to show symptoms after transport. If animals are moved, they should be quarantined at their new location before introduction to an existing groups of animals. Otherwise, purchase, sell, and movement of cows should be limited until more information is known about transmission of this illness.

4. Is the milk safe to drink?

The FDA has not issued any concerns about safety or availability of pasteurized milk or milk products in the US, as a result of this illness.

Pasteurization has continually proven to inactivate bacteria and viruses, like HPAI, in milk. All Grade A, permitted dairies in NC (and across the United States) are subject to the Pasteurized Milk Ordinance and thus any milk shipped from those dairies will be pasteurized and should be considered safe to drink. Any products (cheese, yogurt, ice cream, etc) made with pasteurized milk are also considered safe to consume.

It is illegal to sell raw (unpasteurized) cow's milk in the State of North Carolina for human consumption. It is very important to note that consuming raw cow's milk would increase risk of disease transmission to people and pets.

5. Could my workers be affected?

HPAI can be transmitted to humans, but it is not common. The [Center for Disease Control \(CDC\)](#) has

[recommendations for prevention of HPAI spread to people.](#)

People working around cows and milking centers where cows may be affected should:

- Wear appropriate PPE (including gloves, glasses, and/or masks)
- Wash hands frequently
- Do not touch face, eyes, mouth with dirty hands
- Do not eat, drink, chew gum or other activities that

Symptoms to look for in people include (“Flu like” symptoms):

- Conjunctivitis
- Cough and sore throat
- Headache
- Fever and/or chills

6. Should I (how do I) get my cows tested for HPAI?

Producers should work directly with their veterinarian to determine if cows should be tested for HPAI. The USDA-APHIS encourages samples to be submitted to the [National Animal Health Laboratory Network](#), when appropriate. Samples to test might include milk from clinical cows, nasal swabs, and/or whole blood or serum samples. See the “Should I test?” decision chart at the end of this document to help you and your employees decide to test.

7. What should I do with milk from cows suspected to have these symptoms?

If you have cows with these symptoms, you should contact your veterinarian and follow their guidance. Milk from affected cows should be separated and dumped (after sampling). **Milk from affected cows should not go into the bulk tank or be fed to youngstock.**

8. Is this fatal or will my cows recover?

Cattle have presented with varying levels of severity of the disease, most tend to recover and will reach “back to normal” production values within 30-45 days of onset of symptoms. Mortality has been reported as very low and is most often related to a secondary infection or involuntary culling. While this illness does not appear to be fatal or result in high mortality rates in dairy cattle, it is important to **consider the economic impact of this disease and be diligent in your biosecurity protocols.** Cows will drop more than 50% in milk production within 24hrs and are not likely to rebound to “normal” for at least 30 days. That production loss or increased culling will result in a serious economic loss to the farm. Initial indications from affected herds also point towards decreased reproductive performance and increased somatic cell counts (SCC). **Please implement your farms biosecurity protocols and keep your workers informed of those protocols.**

9. How long will this continue to be an issue?

This situation continues to evolve and it is unknown how long it will persist. NC State Extension and NCDA&CS will continue to work together to update producers and the general public, as needed. Additionally, producers can look to state and national organizations for other resources and information. See the HPAI Resources Section below.

10. What should I do if I or my neighbors raise poultry?

If your cows or birds are not showing symptoms of illness, then standard biosecurity practices should be implemented and followed. This would include limiting cross traffic through facilities, wearing proper PPE, limiting shared equipment, etc. If either cows or birds are showing symptoms of HPAI or any other illness than quarantine procedures should be implemented and you should contact your veterinarian or local state animal health official.

11. What should I do if I find dead birds on my property?

State and local governments have different policies for collecting and testing birds, so check with the North Carolina Wildlife Commission (ncwildlife.org) or the [NCDA&CS](http://ncda&cs) for information about reporting dead birds in your area. Wildlife agencies regularly investigate sick or dead bird events if large numbers are impacted. This type of reporting could help with the early detection of illnesses and will help authorities track incidence of HPAI. In addition to birds, it is possible for other small mammals (cats, raccoons, etc.) to be affected with HPAI (from birds), so it should be reported if you notice an increase in dead small animals also. If local authorities tell you to throw away the carcass (body), **don't touch it with your bare hands**. Use gloves or a plastic bag turned inside out to place the body in a garbage bag, which can then be thrown away in your regular trash. In current cases, HPAI has been linked to pigeons, blackbirds, and grackles in the TX panhandle dairies. However, several other species of migratory wild

birds are known to carry HPAI. Discovery of a single dead bird may not warrant testing, however, finding several dead or dying birds or if you see symptoms in your cattle should trigger a call to your veterinarian or local wildlife official.

12. Can I kill wild birds I see on my property?

Some birds and other small wildlife are protected by state and national laws. Please consult with a local wildlife officer or contact the NC Wildlife Commission prior to hunting or killing birds or other wildlife on your property.

NC Wildlife Helpline at 866-318-2401, Monday – Friday, 8 a.m. – 5 p.m., or email HWI@ncwildlife.org, or call USDA at 866-536-7593.

Biosecurity and Prevention of Exposure

In situations like these, implementing good biosecurity measures is extremely important to reducing spread of disease from birds to cows to people. There are two well documented sources for biosecurity on dairy farms: the [FARM program](#) and the [Secure Milk Supply](#) program. Both provide options for signage, training videos for employees, and other resources to help control traffic on and off of your farm.

The major points of biosecurity to consider when dealing with HPAI in cattle herds are:

1. **Restrict any movement of cattle on/off your farm.** USDA and NCDA&CS are both recommending limited movement of cattle from non-affected areas and restricted (none) movement of cattle from affected areas.
2. **Be diligent in looking for symptoms and train your employees on what to look for.** If noted, contact your veterinarian immediately and follow their guidelines for testing and quarantine.
3. **Establish a biosecurity checkpoint at your farm.**
 - Use signage to direct visitors and vendors on protocols.
 - Use truck and trailer washing protocols for farm traffic and designate separate parking and traffic areas for employees and visitors.
 - Require that any visitors wear PPE, including boot covers and clean clothing.
4. Specific to HPAI, which is spread mostly by wild birds, do your best to **control any interaction between cattle environments and bird populations.**
 - Clean waterers daily to remove any dirt, debris, or fecal matter from birds.
 - Plug holes and burrows where birds can nest. Install netting or other barriers around feed and water areas.
 - Utilize deterrents and scare devices (decoys, fake predators, noise makers, etc) but move and replace them frequently to improve effectiveness.
 - Reduce food and water sources for wild bird populations on your farm. Mow often, avoid standing water, do not feed other wildlife.
 - Keep a broom and container with lid in common feed storage areas to remove any dead bird carcasses. Do not touch birds with bare hands.
5. **Disposal of Discarded Milk.** If you find symptomatic cows in your herd or have to dump non-saleable (or saleable) milk, make sure you do that in a way that birds and other wildlife would not have access. The USDA and FDA currently recommend that discarded milk be heat treated prior to disposal to help reduce or eliminate spread of HPAI. **No unpasteurized (raw) milk should be sold for human consumption. Consumption of raw milk increases risk for disease spread to people and pets.**

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Sources and Resources for Producers and Consumers

State Level Resources:

[NC State Extension Dairy Website](#)

[NC State Extension Disaster Preparedness Website](#)

[NC State Extension HPAI Information](#)

[NCDA&CS State Vet's Office](#)

[North Carolina Cattlemen's Association](#)

[North Carolina Dairy Producers Association](#)

National Level Resources:

[USDA Animal, Plant, Health Inspection Service \(APHIS\)](#)

[Center for Disease Control](#)

[National Milk Producers Federation](#)

[National Cattlemen's Beef Association](#)

Should I take samples for HPAI testing?

