

# Highly Pathogenic Avian Influenza H5N1 in U.S. Dairy Herds

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Cases of Avian Influenza in dairy cattle have been identified in eight states in 26 herds. The detected strain of the virus has also been confirmed in at least one person that had contact with infected dairy cattle. The virus is non-fatal for both cattle and humans, and there have been no cases identified in Vermont or surrounding states at this time.

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## Background

Highly Pathogenic Avian Influenza (HPAI), commonly known as Bird Flu, is a contagious viral disease that is spread by the mucous, saliva and feces of infected migratory birds. The H5N1 strain is known to have been prevalent in migratory birds for decades. Fatal outbreaks in commercial poultry facilities and backyard flocks were identified in the United States in 2022. The virus is highly transferrable between infected birds and other species including cats, racoons, and skunks.

Recently confirmed cases of HPAI have been documented in dairy cattle in eight states including Texas, New Mexico, Kansas, Idaho, Michigan, Ohio, North Carolina, and South Dakota. Among these herds with infected cattle, the virus has impacted about 10% of lactating animals. Additionally, there has been one recently confirmed case of HPAI in a human that had contact with infected cattle. These infections have been non-fatal and have had a 100% recovery rate. Much is still unknown about how HPAI infects and spreads in cattle.

## Animal Signs and Symptoms

Among the confirmed cases of HPAI, those cattle most likely to be infected are older (second lactation and greater) that are in mid to late stage of lactation. These cattle may be more susceptible because the virus appears to concentrate in the mammary tissue and milk of lactating cows. Of the confirmed cases, 100% recovered completely within 2-3 weeks of diagnosis and returned to normal milk production.

The USDA Animal and Plant Health Inspection Service (APHIS) describes the symptoms of HPAI in dairy cattle to include, but are not limited to:

- Sudden drop in feed intake with concurrent decreased rumination and rumen motility.
- Subsequent marked drop in herd level milk production. More severely affected cows may have thickened milk that almost appears like colostrum or may have essentially no milk.
- Changes in manure - most reporting indicates tacky to dry manure in affected cattle.

The above signs and symptoms may or may not be accompanied by the presence of fever. It is important to note that these signs and symptoms can be commonly associated with several other conditions found in dairy cattle. Detection of some or all the above symptoms does not guarantee the presence of HPAI.

Vermont has very little movement of cattle into the state from areas that have reported cases of HPAI. Currently, Vermont is considered low risk for the virus.

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## Treatment and Testing

Treatment for HPAI infected dairy cattle includes supportive therapy associated with caring for cattle with depressed feed intake and rumen activity as well as dehydration. Isolation from other healthy animals is recommended to help decrease the risk of exposure and virus transmission. Milk from suspected infected cattle should be withheld from consumption by humans and other animals.

Testing for HPAI can be submitted by your veterinarian if the virus is suspected. Diagnostic testing can be completed with samples of milk or mucus.

## Prevention and Biosecurity Recommendations

Methods for preventing spread of HPAI include discouraging wild birds from congregating in or near feed storage areas, water access, and water tubs. Clean at-risk water tubs thoroughly and frequently. Monitor all animals closely.

Biosecurity guidance as provided by University of Vermont's Dairy Farm Biosecurity expert, Animal and Veterinary Sciences Research Professor, Dr. Julie Smith, includes the following:

Do not import cattle from affected farms. Carefully consider the need to bring cattle from outside of your area. If possible, isolate stock before mingling with the "home" herd.

Do not visit other farms in affected areas. Reschedule non-essential visits to your farm for two weeks then reassess the risk.

Make sure all employees and essential personnel follow strict biosecurity when entering the farm premises. Park in a designated area. Change into farm-specific footwear in a designated area. Prevent tracking contamination from outside to inside and vice versa.

Discourage wild bird entry to barns and wildlife access to feed and water sources. Clean and disinfect waterers daily if wild birds cannot be excluded.

Call your vet if you observe cattle off feed with reduced milk production or thickened consistency of milk. Implement strict biosecurity.

## Additional Resources

If you have any questions about HPAI or detect signs or symptoms associated with the virus, contact your herd veterinarian immediately.

Additional information is available:

[HPAI in Dairy Cows - An Emerging Animal Health Issue | Agency of Agriculture Food and Markets \(vermont.gov\)](https://www.vermont.gov/agriculture/food-and-markets/animal-health/avian-influenza)

[Highly Pathogenic Avian Influenza \(HPAI\) Detections in Livestock | Animal and Plant Health Inspection Service \(usda.gov\)](https://www.usda.gov/animal-plant-health/inspection-service/avian-influenza)

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