

TIMELY TOPICS

OSU EXTENSION - NORTHEAST DISTRICT
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Mammals and Avian Influenza

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At the writing of this article, High Path Avian Influenza (HPAI) H5N1 has been detected in over 83 million domestic poultry in the United States (US). The outbreak includes commercial and backyard flocks. Most people are aware that poultry may succumb to Avian Influenza but may not know that other animals can be infected with the virus. According to the United States Department of Agriculture (USDA), a variety of mammals have been infected with Avian Influenza H5N1 in the US. The list of over 200 mammals includes bears, foxes, skunks, coyotes, etc. Even marine animals such as dolphins and seals have been found with the virus. Current Avian Influenza H5N1 infections in poultry, mammals, and livestock in the US can be found at the *Detections of Highly Pathogenic Avian Influenza* website at <https://www.aphis.usda.gov/livestock-poultry-disease/avian/avian-influenza/hpai-detections>.

Recently, ruminants have been diagnosed with Avian Influenza H5N1 in the US. The World Organization for Animal Health (WOAH) reported that neonatal goats displaying neurological clinical signs and death were positive for Avian Influenza. The farm was located in Stevens County Minnesota. The poultry on the farm had recently been depopulated due to HPAI H5N1. According to *AVMA News*, ten goats died that ranged in age from 5 to 9 days old. Five of the goat kids tested positive for the virus. The strain of Avian Influenza found in the goats was very similar to the previous HPAI H5N1 strain found in the chickens and ducks. How the goat kids were infected is still under investigation. However, the goats and poultry shared the same area and water source.

Over the past several weeks, veterinarians and dairymen have been reporting unusual illnesses in dairy cattle in Kansas, New Mexico, and Texas. According to *AVMA News* and other reports, the illness appeared in approximately ten percent of the herd. The USDA reported that the illness had a rapid onset and tended to be in older lactating cattle. Clinical signs noticed were a decrease in appetite and milk production. Cows had thick yellow colostrum like milk. Some cattle had abnormal feces and fevers. Some respiratory signs were noticed. According to veterinarians involved in treating the cattle, the most helpful treatment was intravenous and oral fluids. Most cattle recovered in two to three weeks.

After a variety of tests were performed on the cattle with the illness described above, no clear cause of the disease was found. This initiated the USDA, Food and Drug Administration (FDA), and Center for Disease Control and Prevention (CDC) to begin a disease investigation. On March 25th, they reported that HPAI H5N1 had been found in the dairy cattle in Kansas, and Texas. Since this initial announcement, sick cattle in New Mexico, Idaho, Michigan, and Ohio were confirmed with the virus and other states were awaiting test results. Whether a correlation exists between the HPAI H5N1 diagnosis and illness in the dairy cattle is still to be determined.

HPAI H5N1 causes severe clinical signs in domestic poultry and normally results in high mortality rates. At the writing of this article, clinical signs in cattle have been mild and no cattle have died. For this reason, several groups have proposed that HPAI H5N1 should not be used to reference the disease in cattle. The adoption of Influenza A Virus-Bovine (IAV-B) or Bovine Influenza A Virus has been proposed. IAV-B will be used in the remainder of this article as the name of the virus.

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Prevention of IAV-B and/or other foreign animal diseases relies heavily on biosecurity. Livestock producers should have a proper biosecurity protocol in place. One key to biosecurity is to try to prevent contact with wildlife. While this can be difficult, keeping wild birds away from feeding and watering areas should be a priority. For more information on biosecurity, livestock producers should visit *The Center for Food Security and Public Health* at <https://www.cfsph.iastate.edu/>.

The finding of IAV-B in dairy cattle has no impact on the safety of US milk and dairy products. Milk from all sick dairy cattle is discarded and pasteurization kills most bacteria, viruses such as IVA-B, and other pathogens.

On April 1, 2024, the CDC reported a positive human case of Avian Influenza H5N1. The person had been in close contact with dairy cattle thought to be infected with IAV-B. The patient has conjunctivitis and is recovering. This human infection does not change the CDC's assessment of H5N1 virus human health risk. The risk continues to be low. However, individuals that deal with animals or birds suspected of having Avian Influenza virus should wear proper protective equipment.

This is a rapidly evolving situation. Further testing will be required to understand the role that HPAI H5N1 virus played or did not play in the above situations. In the meantime, livestock producers who have questions about sick animals should contact their veterinarian. Also, livestock producers should be protecting their livestock with a good biosecurity plan. Livestock producers wanting additional information on IAV-B in ruminants should contact their veterinarian and/or their Oklahoma State University Cooperative Extension County Ag Educator.

References

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Home Grown – Fungal Disease in Iris

Laura Payne, Horticulture Educator, Payne County

Every spring I get questions about spots on Iris leaves. These spots are a disease caused by the fungus *Didymellina macrospora*. It occurs on leaves of several species of iris, narcissus, and certain other ornamentals. However, it is only a major problem with the commonly grown, rhizomatous species of iris, *Iris germanica*.

Plants infected with the disease will have small, circular, discolored spots. The disease can cause premature death of the leaves which reduces the vigor of the plant. The leaves are what photosynthesize to produce food for the rhizome. When infection is heavy, rhizome growth is reduced, and plants become susceptible to cold damage. Studies have been done to compare infected plants vs. disease-free plants and the vigor is much more noticeable in the disease-free plants.

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At first the spots will appear small, but then will enlarge slowly through spring and early summer. After plants bloom, spots enlarge more rapidly. These spots produce a mass of spores which are responsible for disease buildup during the growing season and are spread by rain or by water splashing on to other leaves.

The fungus survives through the winter on those dead iris leaves that were infected from the previous year. During warm spring weather, masses of spores are produced on those dead, diseased leaves and are then transferred to the new foliage by rain to start the disease all over again.

The best control method is sanitation. Remove all dead leaves from the iris in the fall or winter. If the disease has spread and is out of control, an application of a fungicide may be used to reduce the disease. Select a fungicide that is safe for bees and read the label for application rates and proper PPE. For more information on fungicide and bees, check out this website: https://xerces.org/sites/default/files/2019-09/Fungicide_Regular_Factsheet_Final_Web.pdf

For more information on this or any other horticultural topic, you can contact your local OSU Extension Educator.

Farm Management Resources Available 24/7

Brent Ladd, Extension Assistant

The e-Farm Management website showcases resources to inform producers about farm financial management and production, marketing, and risk management topics. This site contains videos, tools, and publications for farmers and ranchers to strengthen their farm financial management skills.

One example is the Operating Lease vs. Financial Lease video. This video highlights a few differences between an operating and financial lease and situations where each may be used. It also provides an example comparing a lease and a loan and shows the potential differences in cash flow between the two options. Lastly, it shows the different ways these two options can impact tax planning.

To view this video and find additional information on financing a farm, visit:

<https://extension.okstate.edu/programs/farm-management-and-finance/e-farm-management-training/financing-a-farm/>.

More information on this and other farm management topics may be found: 1) by contacting your nearest Extension Educator 2) on the e-farm management website (<https://extension.okstate.edu/programs/farm-management-and-finance/e-farm-management-training/index.html>) or 3) on the OSU Ag Econ YouTube Channel (<https://www.youtube.com/user/OkStateAgEcon>).

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