**H5N1 Highly Pathogenic Avian Influenza (HPAI) in Livestock**
**Information for small ruminant (sheep and goat) and camelid stakeholders**

The most up-to-date information on detections and general information about the virus in livestock is available on the APHIS website at: Highly Pathogenic Avian Influenza (HPAI) Detections in Livestock | Animal and Plant Health Inspection Service (usda.gov)

The information below is provided to address concerns and questions specific to small ruminant and camelid stakeholders.

**How does the Federal Order impact small ruminant producers?**

At this time the Federal Order does not include movement or testing requirements for small ruminants. However, laboratories and state veterinarians must report positive influenza A (PCR or genetic sequencing) and positive Influenza A serology results in livestock, including small ruminants, to USDA APHIS. As a result, any positive Influenza A test results for small ruminants would be reported to APHIS. Additionally, it is important to monitor for any State-specific requirements.

**Has HPAI ever been detected in small ruminants?**

In March 2024, USDA's National Veterinary Services Laboratories (NVSL) confirmed HPAI in very young goat kids on a Minnesota farm that also had poultry infected with HPAI. The goats shared the same pasture and water source with the infected chickens and ducks before they were depopulated, while kidding. This situation led to the newborn goats being exposed to high levels of virus. Adult goats on the premises tested negative for the virus. NVSL identified the virus infecting the goats and poultry on the farm was B3.6. This is a very common genotype that is circulating in our North American wild bird flyways and has sporadically infected poultry flocks in 2023 and 2024. The virus causing the disease in dairy cattle is B3.13.

**Has HPAI ever been detected in camelids?**

In May 2024, NVSL confirmed HPAI in alpacas on a farm that also had poultry infected with HPAI. The alpacas on the farm shared the same pasture and water source with infected chickens and ducks. NVSL identified the virus infecting the alpacas was B3.13, the same virus strain detected in U.S. dairy cattle. The poultry on this farm were also infected with this same strain and based upon analysis of the virus sequence, contamination of the environment due to the virus being shed from the poultry was likely the source of infection for the alpacas.

**What signs did the goat kids exhibit?**

The goat kids displayed no clinical signs at birth and developed (between 5-9 days old) neurological signs including incoordination, inability to stand, difficulty nursing, seizures, blindness, etc. consistent with signs reported in some other HPAI-affected mammals. Other factors likely played a role in the illness, as HPAI was identified in only half of the kids tested.

**What signs did the camelids exhibit?**

The adult alpacas exhibited depression, weakness, and mild respiratory signs, including nasal discharge. The alpacas also experienced abortions/stillbirths.

**Are small ruminants (sheep and goats) susceptible to HPAI, specifically the strain detected in dairy cattle?**

Based upon the recent report of HPAI infection in young goat kids, and historic data showing that the udder of milking goats can be infected with Influenza A virus, it is possible that goats, and potentially sheep, may be susceptible to infection with the strain of the virus that has been found in the dairy cattle.

USDA plans to conduct more research to determine the susceptibility of small ruminants, particularly goats and sheep, to the H5 clade 2.3.4.4b viruses, including the incubation period, viral shedding, and clinical signs.

**What actions should small ruminant and camelid producers take to mitigate risk of HPAI?**

Small ruminant and camelid owners/producers should always practice good biosecurity for all farm animals, including housing different animal species separately with their own feed and water sources. APHIS has information about biosecurity and safe milk handling (including use as animal feed) available at https://www.aphis.usda.gov/livestock-poultry-disease/avian/avian-influenza/hpai-detections/livestock.

Biosecurity resources specific for sheep and goats can be found on the American Association of Small Ruminant Practitioners (AASRP) website.

Producers also should monitor and immediately report any unusual sickness or deaths in their animals, or wild animals on the premises, to their accredited veterinarian, the State Animal Health Official (state veterinarian), or the APHIS Veterinary Services Veterinarian-in-Charge for their state.