Preliminary outbreak assessment

High pathogenicity avian influenza (HPAI) antibodies in dairy cattle in the Netherlands

13 February 2026

Disease report summary

The first report of HPAI antibodies in dairy cattle was reported by the Netherlands Authorities on 23 January 2026. Antibodies to HPAI H5N1 were found in a single cow, initially, which had experienced mastitis and breathing difficulties back in December. Sampling on the farm began after a sick cat from the farm tested positive for H5N1 and subsequently died in late December. Additional testing on the farm identified four other cows that had antibodies against HPAI H5N1. There was no evidence of active infection. Viral RNA could not be detected from any of the blood or milk samples from cows on the farm, meaning sequencing of the strain present in the cattle was not possible. There were no reports of human infection on the farm.

There is no evidence of wider circulation of HPAI in cattle in the Netherlands or mammalian-adapted strains circulating in wild birds or poultry in the country. The risk of incursion of strains from the Netherlands capable of infecting cattle is therefore considered **very low (very rare but cannot be excluded**), with an associated uncertainty due to the lack of sequence data on the Netherlands strain, and hence no comparison possible to those strains still circulating in wild birds in the UK.

Situation assessment

Beginning in March 2024, the US reported outbreaks of HPAI in dairy cattle. More than 1,000 outbreaks in US dairy cattle were reported by the USDA APHIS from Arizona, California, Colorado, Idaho, Iowa, Michigan, Minnesota, Nebraska, Nevada, New Mexico, North Carolina, Ohio, Oklahoma, Oregon, South Dakota, Texas, Utah, Wisconsin and Wyoming. According to the USDA, the last dairy cattle outbreak confirmed in the US was on 13 December 2025. The strains causing outbreaks in US dairy cattle (genotype B3.13 and D1.1) have not been found outside of the Americas (USDA). Bulk milk tank testing in the US suggests there are still five States (CA, TX, ID, OR) which are still detecting virus in milk (National Milk Testing Strategy | Animal and Plant Health Inspection Service).

Until the detection of antibodies in cattle in the Netherlands, evidence of HPAI H5N1 infections in cattle have not been reported from any other countries than the US, despite WOAH clarifying in February 2025 that Members should notify WOAH of occurrences of HPAI in cattle as an emerging disease. There are several instances of HPAI antibodies being found in sheep (Wong 2024, APHA 2025, Norwegian Veterinary Institute 2025). A 2024 preprint of a serosurveillance study of sheep and

goats in Pakistan found 23.9-34% of the samples demonstrated antibodies to influenza A H5 viruses. In Great Britain in March 2025, a case of HPAI H5N1 in sheep was identified following initial serological positivity followed by repeat positive milk testing. In this instance, sampling was carried out as part of enhanced surveillance of co-located livestock on premises where avian influenza (AI) was confirmed in captive birds. Further testing of the remaining flock of sheep at the premises was undertaken and no further infections were detected in the remaining flock. Sequences generated from the sheep did not suggest increased zoonitic risk. In Norway in 2024, researchers tested the blood samples of 220 adult sheep for antibodies to influenza A virus. Initial results were all negative, but 85 samples were re-examined using more sensitive methodology in 2025. Two sheep had antibodies against influenza A, with one of these having antibodies against H5 avian influenza virus, indicating a previous infection. It was suggested exposure likely occurred during a mass wild bird die off from HPAI in the area in 2023 while the sheep were grazing in the fields. The researchers noted that there was no evidence that the sheep exhibited any clinical signs or of transmission of HPAI between sheep. These results indicate that spillover events of HPAI into non-poultry livestock can occur, but, outside of the outbreaks in US dairy cattle, there is limited evidence from these incidents of onward transmission. Another study with ruminants in the US demonstrated the detection of antibodies reactive to different influenza A subtypes, suggesting that the dynamics of infection may be more fluid than previously assumed (Lang 2025).

On 23 January 2026, the Netherlands confirmed one cow on a dairy farm in Friesland tested positive for antibodies against HPAI H5N1. Random sampling on the farm began after one cat on the premises died in late December after testing positive for H5N1. There were no known infected wild birds or poultry associated with the site. The cow had experienced mastitis and breathing difficulties in mid-December. Due to the mastitis, milk from this cow had not been processed for consumption.

Following the positive antibody result, the entire herd of animals was tested, and four more animals were found to have antibodies to HPAI H5N1. These four additional antibody positive cattle had not presented with clinical signs. There has been no evidence of viral RNA in any of the milk or blood samples taken from the farm. Milk from the farm underwent pasteurisation, which would inactivate any virus that might have been present although RNA, if present would still have been detected. Testing of staff on the site was conducted and were all negative for HPAI H5N1 antibodies, demonstrating zoonotic transmission did not occur.

It is not clear if the cows with antibodies represent limited cow-to-cow transmission or if there were several individual exposures from a contaminated source, possibly from the infected cat on site or ongoing detections of HPAI in wild birds in the area (9 reports in wild birds in Friesland in December 2025).

Impact for Great Britain

There is no evidence of HPAI circulation more widely in dairy cattle in the Netherlands. Additionally, there has been no trade in live cattle with the Netherlands because of restrictions introduced from circulation of bluetongue virus there. These combine to mitigate any risk of importing HPAI-infected cattle from the Netherlands into Great Britain.

There is evidence of occasional spillover events in Europe into non-poultry livestock, including sheep and cattle, as well as into other mammals, such as cats, foxes and otters. Mutations in different gene segments, such as the glycoproteins to drive alternative receptor binding, and the polymerase complex to drive adaptation to novel host proteins can occur that may confer an increased zoonotic risk, through increased ability for these viruses to replicate in different mammalian systems make it better adapted to replication in and transmission between mammals, but they are impossible to predict although cumulative mutations are required in several different genes to drive efficient replication in mammalian hosts. These mutations were detected in the viruses spreading between cattle seen in the US outbreaks (APHA 2025a). APHA performs regular surveillance of poultry, dead wild birds, and dead wild mammals to identify those positive for HPAI and monitor potential mutations in virus sequences (APHA 2023). Currently, there is no evidence that mammalian adapted strains are circulating in wild birds or poultry in the Netherlands. Furthermore, migration of birds from Europe into Great Britain is nearly over, which reduces the likelihood of viruses circulating in wild birds in the Netherlands from entering into Great Britain. The risk of incursion of strains from the Netherlands capable of infecting cattle is therefore considered **very low (very rare but cannot be excluded).**

Conclusion

In January 2026, the Netherlands reported evidence of HPAI antibodies in a small number of cattle, as a result of suspicion raised on a dairy farm. Sampling happened at the farm after a cat from there tested positive for HPAI and later died and in late December 2025. The five animals were positive for antibodies only and infectious virus could not be isolated from the animals or their milk. Only one of the cows presented with clinical signs that could have been associated with HPAI infection (mastitis and respiratory problems). The presence of antibodies indicates a previous H5N1 exposure, but it is not known if the cows were infectious to other animals. It is unclear if the cows were infected from environmental sources or if cow-to-cow transmission occurred. Several other countries have found evidence of HPAI exposure in other livestock animals, like sheep and goats.

Given the lack of disease detection outside the affected farm, the absence of any evidence indicating a mammalian adapted strain is circulating in wild birds or poultry in the Netherlands. Therefore, the risk of incursion of strains from the Netherlands

capable of infecting cattle is considered **very low (very rare but cannot be excluded)**, with some uncertainty based on the lack of sequence data**.**

We will continue to monitor the situation.

Authors

Dr. Erica Kintz
Dr. Lauren Perrin
Meg Rawlins
Dr. Helen Roberts
Dr. Scott Reid
Prof Ashley Banyard

References

APHA. 2023. “Avian influenza (bird flu): infection in wild birds and wild mammals.” https://www.gov.uk/government/publications/avian-influenza-bird-flu-infection-in-wild-birds-and-wild-mammals/avian-influenza-bird-flu-infection-in-wild-birds-and-wild-mammals#surveillance-in-wild-mammals

APHA 2025a. “Influenza A (H5N1) of avian origin in domestic livestock in the United States of America.” https://assets.publishing.service.gov.uk/media/67bdfa5944ceb49381213c97/Influenza_A__H5N1__of_avian_origin_in_domestic_livestock_in_the_United_States_of_America_-_updated_outbreak_assessment_3.pdf

APHA. 2025b. “Influenza of avian origin confirmed in a sheep in Yorkshire.” https://www.gov.uk/government/news/influenza-of-avian-origin-confirmed-in-a-sheep-in-yorkshire

Lang Y et al. 2025. “Detection of antibodies against influenza A viruses in cattle.” J Virol 99:e02138-24; https://doi.org/10.1128/jvi.02138-24

Norwegian Veterinary Institute. 2025. “Research project shows previous bird flu infection in a Norwegian sheep.” https://www.vetinst.no/nyheter/forskningsprosjekt-viser-tidligere-fugleinfluensasmitte-hos-en-norsk-sau

USDA. “The Occurrence of Another Highly Pathogenic Avian Influenza (HPAI) Spillover from Wild Birds into Dairy Cattle.” dairy-cattle-hpai-tech-brief.pdf

Wong et al. 2024. “Highly pathogenic avian influenza H5 virus exposure in goats and sheep.” bioRxiv 2024.08.31.610397; https://doi.org/10.1101/2024.08.31.610397

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