



13 May 2024

### **Updated OFFLU Statement on high pathogenicity avian influenza in dairy cows**

Since its inception in 2005, [OFFLU](#) (WOAH-FAO network of expertise on animal influenza) has been closely monitoring the global impacts of high pathogenicity avian influenza (HPAI), including working with multiple countries affected by the current H5N1 HPAI panzootic. Field veterinarians and OFFLU scientists in influenza Reference and Collaborating Centres play a key role in responding to novel outbreaks and characterising avian influenza (AI) viruses, including those that spillover to livestock or new and unusual hosts.

OFFLU scientists strive to share scientifically sound information for the surveillance and diagnosis of animal influenzas for Member laboratories and are closely following the current situation of [AI detections in dairy cows](#) (the first reported spillover to bovine species) and an associated human case in the USA as well as subsequent reports of viral RNA detections in milk. A [case definition](#) for HPAI H5N1 clade 2.3.4.4b in livestock is described by USDA. WOAHA recommends investigation of suspected HPAI cases in [non-avian species including cattle or other livestock populations](#) with high risk of exposure to HPAI viruses.

#### **Current epidemiological and virology update: HPAI dairy cattle**

This virus is a A(H5N1), Gs/Gd lineage, clade 2.3.4.4b, [genotype B3.13](#), 4 gene reassortant with the PB2, PB1, NP and NS segments of North American wild bird origin. Before the detection of HPAI in cattle, the genotype responsible B3.13 had not been detected in poultry. It was first detected in a wild bird in November 2023, followed by only a few more detections in wild birds and one skunk prior to the detection in cattle. Current evidence points towards a single introduction of HPAI into cattle followed by lateral spread through dairy herds.<sup>1</sup> To current knowledge, this HPAI genotype has not been detected outside the USA. OFFLU will continue to monitor the situation and provide updates as they become available; encourages countries to report AI in unusual hosts; and share whole genome sequence data on publicly available platforms or with OFFLU.

To date, a single human case of A(H5N1) of the B3.13 genotype has been reported in a dairy worker in the USA. The individual presented with conjunctivitis and worked on a premises presumed to have been affected by HPAI<sup>2</sup>. A joint [FAO/WHO/WOAH preliminary assessment](#) of recent influenza A(H5N1) viruses has been published assessing the risk to the general population as “low” and further guidance is being developed and will be shared when it is available.

There have been reports of detections of viral nucleic acid in pasteurised milk. RRT-PCR does not discriminate between inactivated and infectious viruses; therefore, these tests alone are not

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<sup>1</sup> <https://www.biorxiv.org/content/10.1101/2024.05.01.591751v1>

<sup>2</sup> <https://www.nejm.org/doi/full/10.1056/NEJMc2405371>

meaningful for inactivation studies or for monitoring the effectiveness of food safety measures along the food chain. Importantly, viable virus has not been reported in tested samples ([FDA updates](#)). The consumption of raw unpasteurised milk should be avoided. Of meat items tested, no virus has yet been detected ([USDA updates](#)). OFFLU will share further information as it becomes available.

***The following guidance reflects current understanding and are subject to change as the situation evolves.*** As current evidence indicates a single introduction into cattle in the USA, OFFLU scientists do not necessarily recommend active AI surveillance in livestock for any countries, however, these events do raise awareness of possible risks and consequences of AI spillover into unusual hosts. Should countries wish to conduct surveillance in cattle it is suggested that a risk-based approach is taken. *It is important to note that some cattle which have tested positive have been asymptomatic and estimated herd level incubation time appears variable.* Factors to consider when guiding where risk-based surveillance should take place include but are not limited to:

- Importation of cattle from an infected herd or a geographical area where infection has been detected in cattle.
- Unexplained mortality in wild or domestic animals including birds and cats on the premise or in the vicinity if compatible with AI (including neurological signs).
- Evidence supporting an increased trend of milk drop with no diagnosis in conjunction with a relatively high exposure risk to AI reservoir species or heavily contaminated environments, particularly if the genotype B3.13 has been identified.

In herds which matching a defined criteria risk, sampling could be prioritised in cattle showing clinical signs compatible with the [case definition](#) for infection by AI virus, where other common bovine diseases have been ruled out.

[Diagnostic Guidance](#) is provided for sample collection and testing.

OFFLU scientists acknowledge that there are potential negative socioeconomic and health impacts including for the wellbeing of farm workers and veterinarians and misinformation or speculation should be avoided as outbreak investigations continue. OFFLU acknowledges and thanks the outbreak investigation teams, veterinarians and scientists at USDA for sharing rapidly information when it becomes available. OFFLU scientists acknowledge that effective control, intervention measures and sharing of information must recognise the requirement for all stakeholders to work together and to respect different stakeholder needs.

OFFLU urges the scientific community to continue to:

1. Monitor HPAI events in animals and report to WOA. Include HPAI in differential diagnosis in non-avian species, including cattle and other livestock populations with high risk of exposure to HPAI viruses.
2. Timely deposition and sharing genetic sequence data in publicly available databases in order to monitor viral evolution and potential transmission pathways.
3. Coordinate studies to better understand pathogenesis, transmission and adaptation of virus lineages and share the results with OFFLU.
4. Provide support to national risk managers.

OFFLU strives to share information with stakeholders and partners and has created a page specific for the [HPAI detections in livestock](#), where new information will be updated regularly. The situation continues to rapidly change as epidemiological investigations continue and more information becomes

available, furthermore investigations across multiple sectors take time to conduct. Further information on these events is being shared and updated daily by the [USDA](#), [FDA](#) and [CDC](#). Answers to [frequently asked questions](#) are also available on their websites.

OFFLU ([www.offlu.org](http://www.offlu.org)) will continue to support the activities of its parent organisations (FAO and WOA) and partners (WHO) in ensuring that scientifically sound information is available on strains of virus that are detected in poultry and in unusual hosts.

Disclaimer: This statement provides the point of view of independent OFFLU experts and does not necessarily reflect the position of the parent organisations FAO and WOA.

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