



CONSULTATIVE SIGNAL ASSESSMENT  
**PRIMARY RISK ASSESSMENT**  
EVIDENCE BASED RISK ASSESSMENT  
PUBLIC HEALTH EVENT ASSESSMENT

**SEVERAL OUTBREAKS OF HIGHLY PATHOGENIC AVIAN INFLUENZA IN  
POULTRY FARMS IN BELGIUM (SINCE SEPTEMBER 2022)**

Date of the signal	Date of the PRA	Signal provider	Experts consultation	Method
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## Signal

Since 2021 outbreaks with high pathogenic avian influenza (HPAI) in wild birds are continuously detected in Belgium. Since 2022, the seasonal pattern of this circulation has disappeared.

In the autumn of 2022, the number of HPAI outbreaks in wild birds increased even further. In addition, since 1st September 2022 HPAI outbreaks (H5N1) have been detected in 20 farms, including 13 professional poultry farms, 6 private owners and 1 zoologic park.

Although at this stage there is no evidence of zoonotic potential of the current strains and therefore the risk for public health remains to be assessed as low for the general population, it is important to follow up on these outbreaks and their evolution as the environmental pressure is extremely high resulting in increased opportunity for infection and adaptation.

## Description

### Cause known?

Yes, avian influenza viruses are divided into those of high (HPAI) and low (LPAI) pathogenicity, according to their severity in the avian species they usually infect. HPAI epizootics are known and documented worldwide, all due to the A/H5 and A/H7 virus groups. The source of outbreaks in domestic poultry has been described as originating from infected wild birds (Steenfels et al., 2020).

### Unexpected/unusual

Expected. In 2014, 2015 and 2017, outbreaks of highly pathogenic avian influenza virus A(H5N8) in poultry were notified by several European countries including Belgium. Previously, this virus has been detected among wild birds and domestic poultry in Asia. Since then, outbreaks of HPAI have continuously been detected in wild birds. What is unusual is the unprecedentedly high level of HPAI virus detections in wild birds between June and August 2022, a period when no or only a low number of HPAI virus detections had been reported in wild birds in previous years. Indeed, several seabird species exhibited widespread and massive mortality from HPAI A(H5N1) at their breeding colonies, including in Belgium, Germany, the Netherlands, France and United Kingdom. The high frequency of HPAI virus detections in colony-breeding seabirds along the northwest coast of Europe, together with spillover events to other wild birds sharing the habitat of those seabirds, imply a higher risk of HPAI virus incursion into poultry establishments located in this area

### Severity

The 'high' and 'low' pathogenicity is not related to the severity of the disease in humans. Some avian viruses do not cause disease in humans, while others are known to only cause mild disease. Some, however, are known to cause severe disease in humans, for example, some of the Asian H5N1- descendants. So, severity will depend of the specific strain involved

### Dissemination (Low/Medium/High)

- Risk of dissemination/infection of the current circulating H5N1 virus type in human (if there are cases) is assessed as low for the general population, and low to medium for occupationally exposed people.
- Risk of dissemination of the current circulating H5N1 virus type in poultry farms and hobbys farms is assessed as high, strongly depending on the applied biosecurity measures but also on other factors such as type of poultry production, outdoor course, cograzing with wild birds, ...

### Risk of (inter)national spread

The risk of international spread is extremely high in wild birds and poultry as shown by the current general spread. The virus is present from Asia, Russia/Kazachstan, Europe, North America, Canada, Mexico and the African Continent

## Preparedness and response

### Preparedness

In order to detect quickly any introduction of avian influenza virus, there are in Belgium 2 surveillance programs in **poultry flocks** that have been set up by the AFSCA-FAVV:

- clinical surveillance (passive)
- serological screening (active)

	<p>Surveillance in <b>wild birds</b> is the responsibility of the Regions and passive monitoring programs are continuously operational and have been set up by the 3 Regions, in consultation and cooperation with the AFSCA-FAVV. In addition passive monitoring in red foxes, wild mammals, has been put in place in 2022 by the 3 regions, represented by DNF/DEMNA (Wallonia) – ANB (Flanders) and LB (Brussel).</p> <p>All samples from these surveillance programs are analysed at the Sciensano National reference laboratory (NRL) for avian influenza (NRL-AIND).</p> <p>Capacity for diagnosis does exist at Sciensano, both at NRL-AIND for birds and at National Reference Centre (NRC) for human influenza.</p> <p>The genetic constellation of the circulating strains is being monitored by Sciensano-NRL for the appearance of mammalian adaptation markers In addition, evaluation protocols are being implemented by the NRC in cooperation with the EURL-AI (IZsVe) and the NRL who provides strains for <i>in vitro</i> evaluation using human cell lines.</p> <hr/> <p><u>Control measures</u> have been put in place in the affected farms (see map in annexes) Since October 5, 2022, there is a reintroduction of confinement for all registered poultry farms.</p> <p>The confinement applies to all registered establishments, namely:</p> <ul style="list-style-type: none"> <li>- conventional commercial poultry establishments;</li> <li>- bird and poultry dealers;</li> <li>- all private holders registered in Sanitel.</li> </ul> <p>This last category includes all private keepers with more than 200 birds, but also all other private keepers registered in Sanitel, for example because they sell birds on markets.</p> <p>In addition to the general measures, the following additional measures apply:</p> <ol style="list-style-type: none"> <li>1. All poultry in registered establishments must be confined or protected to avoid contact with wild birds.</li> <li>2. All poultry and other birds must be fed indoors (or under nets) to limit the risk of contact with wild birds.</li> <li>3. Watering of poultry and other captive birds with water from surface water tanks or rainwater accessible to wild birds is prohibited, unless such water is treated to ensure inactivation of any viruses.</li> </ol> <p>There is currently no general obligation for all private owners to confine their poultry, but the AFSCA-FAVV strongly advises everyone to protect their poultry already.</p> <p>For humans cases: Influenza of animal origin is a mandatory notifiable infectious disease in the 3 regions. The regional authorities' guidelines include comprehensive general measures to avoid transmission of avian flu to risk groups (e.g. in poultry farms, laboratories, wildlife rescue centres, ...) and specific measures to be taken in the case of a person with possible infection. Samples can be sent to the NRC for testing.</p>
<p><b>Public health impact</b></p>	
<p><b>Public health impact in Belgium</b> (Low/Medium/high)</p>	<p>In the current situation the public health impact in Belgium remains very low. For occupationally exposed people the risk is enhanced due to their contact to infected animals and assessed to be low to medium.</p>
<p><b>Recommendations</b> (surveillance, control, communication)</p>	<ul style="list-style-type: none"> <li>• Keep surveillance of birds (wild and livestock) as well as the control measures in place.</li> <li>• Develop an active surveillance plan on wildbirds, in collaboration with the Regions (competent authority for wildlife in Belgium).</li> </ul> <p>People exposed to these farms are encouraged to wear appropriate personal protective equipment. Surveillance and follow up of exposed people and test people with respiratory symptoms or other atypical severe symptoms following exposure to likely infected animals.</p>

**Note** : In February 2022, a PRA on H5N1 avian influenza in mammals was written and presented to the RMG. One of the recommendations was to set up a systematic surveillance/follow-up among persons professionally involved in avian influenza outbreaks, such as the farmer and his family, persons working on the farm, veterinarians, inspectors and culling teams. The regional authorities agreed on the principles of this surveillance and are currently defining their priorities and modus operandi, under the coordination of Sciensano, which is drawing up the follow-up protocol on that basis.

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**Actions**

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## REFERENCES

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## ANNEXES

Map : Restriction zones to prevent further spread, November 2022 (source FAVV- AFSCA)

