

**Avian influenza¹, a disaster for breeding,
an exceptional risk for humans**

Press release of the French National Academy of Medicine*.

December 22, 2021

On September 3, 2021, poultry farms in France finally regained their status of "free country" from avian plague caused by the highly pathogenic avian influenza virus (HPAI). This return to a disease-free status was brief.

On September 9, an HPAI virus outbreak was declared in an ornamental bird farm. From November 5 onwards, the discovery of cases in birds of the avifauna (migratory and commensal) required an increased vigilance in areas at particular risk of virus spread (wetlands frequented by migratory birds; areas with high poultry densities). On December 9, six poultry farms in northern France were infected with an HPAI H5N1, already present in Italy, Hungary, Belgium and the United Kingdom, which resulted in the loss by France of its status as a free country.

Despite measures to stop its spread within a farm or between farms, this virus remains highly contagious. This disease, most feared by poultry farmers, is a disaster, due to a mortality rate that can reach 100% and the economic consequences of losing the "free" status for the country concerned (depopulation of infected poultry farms, stop of exports).

This HPAI H5N1 virus is not adapted to humans and has not acquired the human-to-human transmission capacity. This explains the low number of human deaths linked to this virus: 455 deaths worldwide from 2003 to 2019, no deaths in 2020 or in 2021. These deaths have been observed in humans living in poor hygienic conditions, in very close contact with birds carrying the virus. In France, no human case linked to a contamination by an HPAI virus has been observed to date.

After sequencing the viruses currently present in farms, such as the HPAI H5N1 virus isolated in the North of France, the ANSES national reference laboratory in Ploufragan concluded that there is no increased risk of transmission of this virus to humans, and therefore no zoonotic risk. Up to now, there has been no influenza pandemic linked to an HPAI virus responsible for avian influenza.

In the case of contaminated breeding, the main aim is to avoid the spread of the virus among birds and to limit the possibility of genetic variation, a characteristic of influenza viruses. Birds from affected or potentially affected flocks do not enter the marketing chain for human consumption.

Pigs, which can harbor swine, human and sometimes avian viruses, require virological surveillance as they can be the reservoir for these reassortments. During the 2009 influenza pandemic, it was observed that the H1N1 influenza virus could have been transmitted from humans to pigs and then from pigs to humans.

The French National Academy of Medicine, alerted by its Veterinary Sciences Section, points out that the current epizootic of highly pathogenic avian influenza H5N1 or avian plague, currently observed in France:

- is a serious animal health problem;
- exposes human health to a zoonotic risk only in exceptional circumstances, in case of a very close contact with sick birds;
- will have serious economic consequences for the poultry sector, as long as it cannot be demonstrated that our country has regained a "free country" status with regard to this virus (according to European regulations and World Organisation for Animal Health standards).

¹. The highly pathogenic avian influenza (HPAI) virus, the agent of a disease known in veterinary medicine as avian plague, is a virus of the influenza virus family. For this reason, fowl plague is often inappropriately referred to as "avian influenza", when in fact it is a systemic disease in birds characterized by sepsis with a high mortality rate, often with encephalitis, and not a purely respiratory disease.

* Press release of the Academy's Rapid Communication Unit validated by the members of the Board of Directors on December 21, 2021.