

From birds to other animals

All birds are concerned

The disease has been well described among domestic birds such as turkeys and chickens. However, all domestic and wild birds (including migratory ducks and geese) probably are vulnerable to the HPAI H5N1 virus. Migratory ducks play an important role in the spread of the virus across far distances. Water that is contaminated by infected bird droppings can serve as a passive vector for the most vulnerable species such as swans, which should be considered more as victims of the disease than as responsible for its spread. Domestic birds might become contaminated through contact with infected wild birds or water polluted with the HPAI H5N1 virus. Conversely, wild birds might become contaminated through contact with infected domestic birds or water polluted with their droppings or by domestic by-products that commonly are used as feed on fish farms in Asia and Africa.



Domestic and wild ducks on a rice paddy in Madagascar, 2005 – Renaud Lancelot, © Cirad

And ostrich?

Ostrich farming has been developed world wide. In South Africa, an epizootic of influenza among these birds caused a direct (mortality) and indirect (the interdiction of exports) losses estimated at several tens of millions of euros in 2004.

When the flu is shared

Under certain circumstances, viruses with avian origins may infect mammals (pigs, horses...), or even humans.

Nonetheless, this infection generally remains invisible. Wild (tigers in Thailand) or domestic (cats) felines have fallen ill or died after ingesting birds that died of avian influenza, or by having close and repeated contact with sick birds or their droppings. To date, such events are rare and there is little evidence that cats play a significant role in the transmission of the pathogenic H5N1 virus. However, genetic evolutions (mutation, reassortment) may allow a virus to adapt itself to a new host species. Great vigilance is required faced with this risk of crossing the species barrier.



*Sample taken from a red-tailed godwit, traditionally hunted in Mali, 2006
Alexandre Caron, © Cirad*

Commercial exchanges and hygiene

All evidence indicates that uncontrolled commercial movements and a lack of hygiene are much more effective than migratory birds at rapidly transmitting the virus to numerous farms in a given region. Examples are the movement and markets of live birds and the importation of hatching eggs or of chicks of suspect origins. However, the respective contribution of wild birds and of commercial exchanges is difficult to quantify : it is a research question which several teams are studying actively.