Preliminary Outbreak Assessment

Outbreaks of H5N2 HPAI in poultry in Canada and wild birds in the USA and H5N8 HPAI in captive wild birds and backyard poultry in the USA

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Disease Report

Canada has reported eleven outbreaks of H5N2 highly pathogenic avian influenza (HPAI) in British Colombia (see map; OIE, 2014). Turkeys for meat and broiler breeders have been affected. Disease control measures have been implemented including 3km protection and 10km surveillance zones. In addition a primary control zone is in place, bordered on the south by the United States border and on the east by the border between British Columbia and Alberta within which all movements of susceptible live poultry is controlled. In addition, licensing for movement of live poultry, poultry products, by-products and fomites will also be required for the protection zone.

In the USA, in Washington State just over the border from British Colombia, wild birds (Northern Pintails, *Anas acuta*) have tested positive for H5N2 HPAI. No commercial poultry have tested positive in the USA.

In a further report, a captive Gyr Falcon (fed on hunted wild waterfowl) has tested positive for H5N8 HPAI in Washington State. In addition, backyard premises in Oregon State where mixed poultry were kept has also tested positive for H5N8 HPAI. The presence of wild waterfowl was frequently noted at the premises. No commercial premises have reported disease.
Situation Assessment

H5N2 HPAI has caused eight outbreaks in China and Taiwan since October 2014 across several regions (see map below). No human cases have been reported in relation to infection with this strain although seropositive, subclinical individuals have been detected in previous years where there has been close contact with live poultry. The virus has been circulating in the region for many months and phylogenetic analysis of recent viruses isolated in China suggested they cluster in clade 2.3.4 (Wu et al, 2014). The H5N8 HPAI viruses in Asia are also in the same clade for the HA genes.

These outbreaks in Canada represent the first time this particular strain has been reported in North America and it is possible there may be a wild bird component to the source of the virus in Canada, given the common migratory route for wild birds across East Asia and Northwest America. Phylogenetic analyses show the viruses have genes from both H5N2 common to North American wild birds and the H5N8 HPAI Eurasian strain and therefore may be a recent reassortant event (CFIA, 2014).

In the USA, the virus from the backyard outbreak showed 99.3% identity for the HA gene to one from Republic of Korea isolated from a bean goose, and 99.7% identity in the NA gene to virus isolated from a Baikal teal also from the Republic of Korea (OIE, 2014b).
According to TRACES, the EU Trade notification system, there have been no recent consignments of poultry (live, day old chicks or hatching eggs) to the UK from the affected region in Canada.

**Conclusion**

There is no significant increase in risk for disease incursion into the UK as a result of this outbreak. We consider there to be a constant low risk of incursion of any notifiable avian disease into poultry throughout the year and the current situation in Europe means the UK is at an increased risk at present. Nevertheless the increase in new HPAI strains circulating widely in China and South East Asia and the recent outbreaks in Northwest America and Northern Europe does suggest that vigilance and increased biosecurity is important at this time of year.

We will continue to report on the situation. We would like to remind all poultry keepers and attending veterinarians to maintain high standards of biosecurity, remain vigilant and report any suspect clinical signs promptly.

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**References**


OIE (2014b) Highly Pathogenic Avian Influenza in USA: Follow-up Report No.1 (OIE Report No. 16810; reported 19/12/2014)
