

## Updated Outbreak Assessment

# Outbreaks of avian influenza in poultry in North America, Africa and Europe

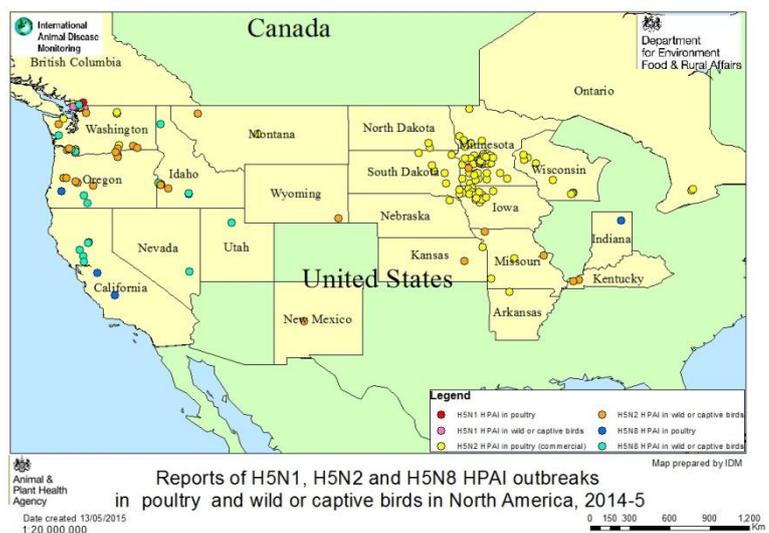
12<sup>th</sup> May 2015

Ref: VITT/1200 HPAI in North America, Africa & Europe

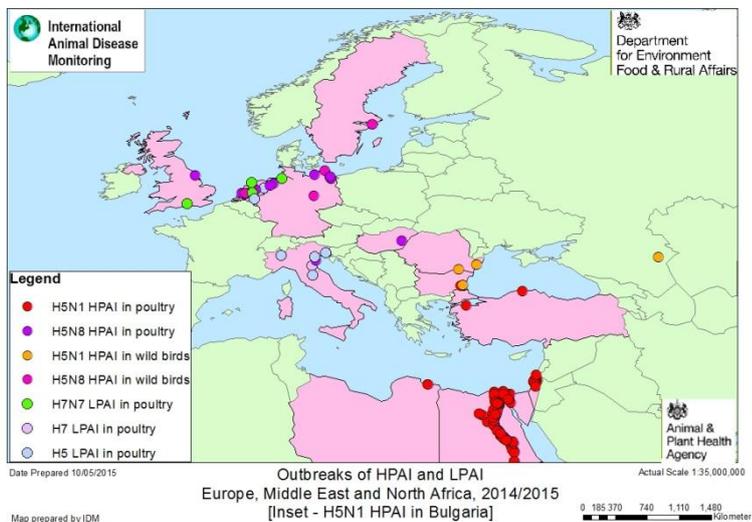
## Disease Report

Since our last update in April, the USA has now reported 156 confirmed outbreaks of H5N2 HPAI resulting in the culling of over 32.5 million poultry between December 2014 and May 2015 (OIE, 2015; USDA, 2015). This is the most extensive epizootic of avian influenza reported in the USA. New States which have reported cases in wild birds include Kentucky and New Mexico and in poultry in Nebraska, while Indiana has an outbreak of H5N8 HPAI in a backyard poultry farm which is the first report of this strain in the Mississippi flyway and is a large jump from previous reports of the virus in wild birds in the Pacific flyway (see map below). The findings of infection in poultry and wild birds in the East of the States may put other large poultry producing regions (Indiana, Ohio and Pennsylvania for eggs; Alabama and Georgia for broilers; North Carolina for turkeys) at risk (NASS, 2015).

To date, 60 wild birds have tested positive for H5N1, H5N2 or H5N8 infection in various States since December 2014 (USDA, 2015). All the identified viruses are East Asia / America lineage reassortments that have a common haemagglutinin gene.

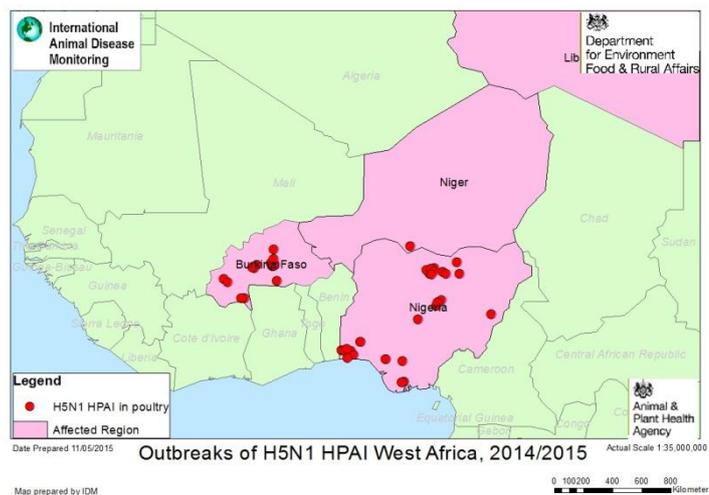


Canada has reported two further outbreaks of H5N2 HPAI in Oxford County Ontario (see map; OIE, 2015) in a chicken broiler farm with a population 27,000 chickens and another turkey fattener farm, just 500 metres from the second outbreak. No epidemiological links were reported with the outbreaks in British Columbia in 2014 however initial sequence analysis indicates the virus is the same Eurasian H5 origin virus that has been circulating in North America. A wild bird tested positive for H5N8 HPAI in British Columbia, suggesting disease continues to circulate and vigilance on farms should remain heightened.



In Europe, further to the cases of H5N1 HPAI in Bulgaria and Romania, Russia has reported a case of H5N1 HPAI in Dalmatian pelicans found dead in Astrakhan region. New incursions of H5N1 HPAI have been reported from Turkey in a backyard flock in Kastamonu region (Black Sea coast) and in a commercial premises in Balikesir region (Sea of Marmara coast). In the Middle East, Palestine has reported a further

outbreak of H5N1 HPAI in backyard birds in the Gaza strip and Israel has reported another outbreak in Hazafon region. The relationships amongst all these viruses is under investigation by the international reference laboratory at APHA-Weybridge.



In West Africa, Niger has now reported an outbreak of H5N1 HPAI on the border with Nigeria, while Burkina Faso has reported 22 outbreaks since March 2015. In April 2015 the FAO assessed the situation in Nigeria and concluded that the border countries of Benin, Cameroon, Chad, Niger, Burkina Faso, Djibouti, Cote d'Ivoire and Sudan because of the level of trade and transhumance between all of these countries constituted high risk of spread (FAO, 2015). Mali and Ghana should also now be concerned.

## Situation Assessment

This year continues to be unprecedented in terms of the frequency of avian influenza outbreaks, the regions affected and the role of wild birds, trade or population movement and poor biosecurity in increasing incursion risk and transmission. The significant spread across short distances in the USA has led researchers to look into the possibility of airborne and aerolysed transmission (CIDRAP, 2015) that has been demonstrated previously such as in the Netherlands in 2003 with H7N7 HPAI (Ypma et al., 2013). Originally, all introductions into poultry farms were considered to be through contact (direct or indirect) with wild birds, either by contaminated footwear/clothing on poultry workers or

contaminated equipment and bedding. However the virus is now being found in neighbouring farms or in several units on a single premises, raising the possibility of other dispersal pathways through the air contributing to scientists considering the possibility of lateral spread.

## Conclusion

There is no specific increase in risk for disease incursion into the UK as a result of these latest outbreaks. Our main pathways for disease introduction into UK poultry are through trade in live poultry and poultry products, contact with infected wild birds or contaminated fomites (bedding, equipment, transport) and these are more relevant to Europe, due to geographical proximity and levels of trade, transport links or wild bird flyways than for North America.

We consider there to be a constant low risk of incursion of any notifiable avian disease into poultry throughout the year but the current situation in Europe means the UK is still at an increased risk.

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.

## Authors

Jonathan Smith

Professor Ian Brown

Dr Helen Roberts

## References

CIDRAP (2015) <http://www.cidrap.umn.edu/news-perspective/2015/05/signs-airborne-h5n2-found-iowa-reports-more-outbreaks> Accessed 12/05/2015

FAO (2015) H5N1 HPAI spread in Nigeria and increased risk for neighbouring countries in West Africa. <http://www.fao.org/3/a-i4561e.pdf> Accessed 12/05/2015

OIE (2015) Immediate Reports and Follow-up reports.  
[http://www.oie.int/wahis\\_2/public/wahid.php/Diseaseinformation/reportarchive](http://www.oie.int/wahis_2/public/wahid.php/Diseaseinformation/reportarchive) Accessed 12/05/2015

NASS (2015) - Charts and Maps - Poultry  
[http://nass.usda.gov/Charts\\_and\\_Maps/Poultry/index.asp](http://nass.usda.gov/Charts_and_Maps/Poultry/index.asp) Accessed 12/05/2015.

Department for Environment, Food and Rural Affairs  
Animal & Plant Health Agency  
Veterinary & Science Policy Advice Team - International Disease Monitoring

USDA (2015) Update on avian influenza findings. [APHIS Website](#) Accessed 12/05/2015

Ypma, R.J., Jonges, M., Bataille, A., Stegeman, A., Koch, G., van Boven, M., Koopmans, M., van Ballegooijen, W.M. & Willinga, J. (2013) Genetic data provide evidence for wind-mediated transmission of highly pathogenic avian influenza. *J. Infect. Dis.* 207(5):730-5. doi: 10.1093/infdis/jis757.



© Crown copyright 2014

You may re-use this information (excluding logos) free of charge in any format or medium, under the terms of the Open Government Licence v.2. To view this licence visit [www.nationalarchives.gov.uk/doc/open-government-licence/version/2/](http://www.nationalarchives.gov.uk/doc/open-government-licence/version/2/) or email [PSI@nationalarchives.gsi.gov.uk](mailto:PSI@nationalarchives.gsi.gov.uk)

This publication is available at <https://www.gov.uk/government/collections/animal-diseases-international-monitoring>

Any enquiries regarding this publication should be sent to us at

[iadm@defra.gsi.gov.uk](mailto:iadm@defra.gsi.gov.uk)