

Updated Outbreak Assessment

Avian Influenza of high pathogenicity (H5N1, H5N2, and H5N9) in poultry in France

23 December 2015

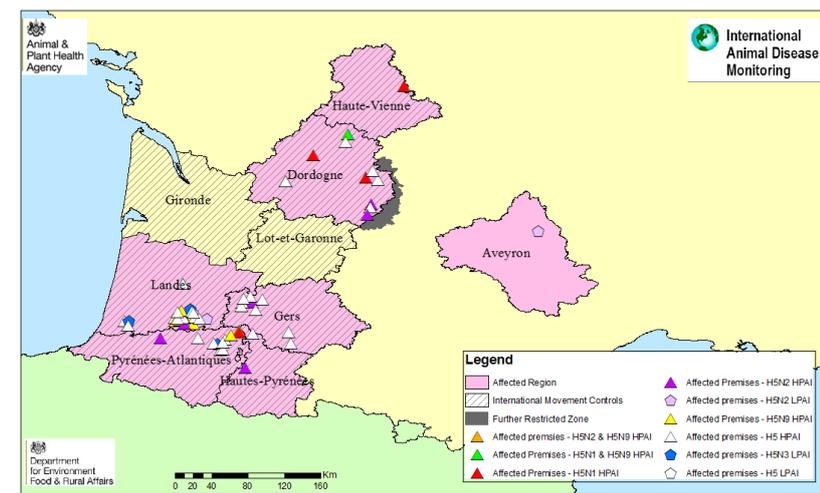
Ref: VITT/1200 HPAI in France

Disease Report

Since the last update on the 16th December, more outbreaks in poultry have been reported as a result of increased surveillance in South West France (Ministère de l'Agriculture, France, 2015; see map – not all outbreaks visible at this scale). To date there are 61 outbreaks of HPAI H5 (N1, N2 and N9), 54 of which have been reported to the EU Animal

Disease Notification System.

Six regions are affected – Dordogne (12 outbreaks); Landes (27 outbreaks); Haute Vienne (1); Gers (9); Pyrenees Atlantique (10) and; Haute Pyrenees (2). The situation continues to evolve and the French Authorities have increased the size of restriction zones to cover more regions (hatched / grey area in map) and this has been adopted by the European Commission under



H5N1, H5N2 & H5N9 HPAI and H5N2, H5N3 LPAI outbreaks in backyard and commercial poultry France, December 2015

special written procedure (SANTE/7135/2015). Movements of live birds from any control zone are subject to pre-movement testing, which has led to the detection of more infected flocks, but does provide some additional assurance <http://agriculture.gouv.fr/la-liste-des-communes-de-la-zone-reglementee-influenza-aviaire>

Situation Assessment

ANSES, the French risk assessment agency, has published an assessment of the likely source of infection, limited partial virus gene sequence data, risk to public health and relevance of restriction measures (ANSES, 2015).

The source considered most likely is that LPAI European origin avian influenza viruses were circulating in poultry and have mutated to HPAI then silent spread has occurred in

species which show few clinical signs (Anseriforme poultry) or which have been partially immunised by exposure to related LPAI viruses. This theory is given greater confidence by the knowledge that these LPAI viruses are often detected year in year out in this area through the EU poultry survey. The preliminary sequence data suggest there is a common H5 sequence to the LP/HPAI viruses.

A less likely theory is that multiple LPAI viruses were circulating *recently* in wild birds and then, after contact with the poultry, these viruses mutated. It is considered very unlikely that the HPAI viruses were circulating in wild birds as there have been no reports of such in EU-wide surveys.

On the restriction measures, there is still some uncertainty around how the viruses are spread from one location to another given the significant increase in recent days of new infected premises, hence the large zone now in place.

On the public health risk, it is noted that only 'Eurasian' strains of H5N1 HPAI have caused human disease (and derived from a different gene lineage to the viruses involved in the current outbreaks), and even so only for people in very close contact with poultry (during home slaughter for example) and no cases have been associated with H5N2 or H5N9 HPAI infection in poultry. See also ECDC (2015).

Nevertheless, the full gene sequences for a multiple number of viruses will need to be determined and analysed before clear conclusions on pathways of origin, length of time the virus has been evolving in the field and implications for zoonotic risk can be concluded, as they may still be re-assortments or genetic adaptation occurring. Based on limited sequencing for just three viruses, the authors concluded there are a number of previously identified mutations which may promote the replication of the virus in the mammalian respiratory tract but the combination of all these mutations in affecting host range is complex. Infection with any AI virus in particular circumstances of high exposure (such as those operatives in the field who are involved in control measures) cannot be ruled out.

It should be noted that understanding how widely LPAI viruses are circulating in poultry is important as this could present a substantially immune population and needs to be considered in control decisions and surveillance design.

It would be helpful to understand more about the way the "feeding" duck and geese industry in France is managed and whether this contributes to the spread. The method for raising birds for the foie gras production for example is intensive and would involve handling the birds frequently, which may increase the likelihood of transmission with shared equipment or poultry handlers.

From a trade perspective, we would like to highlight that the new EU Implementing Decision allows a derogation for movement of hatching eggs and day old chicks from the large restriction zone only under written agreement between competent authorities on a case by case basis.

Conclusion

The publication of the ANSES risk assessment and the new restriction measures are welcome. The risk to the UK as a result of these outbreaks is primarily around pathways which involve lapses in biosecurity or trade routes, rather than through wild birds as these are apparently wholly European origin viruses. However the situation in France simply reinforces what we already knew, that these LPAI viruses circulate in wild birds and cause occasional spill-over outbreaks in poultry may be difficult to detect in domestic waterfowl species and which may then mutate into HPAI viruses following infection of galliforme hosts.

We will continue to monitor the situation closely. We would like to remind all poultry keepers to maintain high standards of biosecurity, remain vigilant and report any suspect clinical signs promptly and in addition using the testing to exclude scheme for avian notifiable disease where appropriate for early safeguard. For more information, please see www.defra.gov.uk/ahvla-en/disease-control/nad

The risk level for the UK remains at low, but heightened.

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References

ANSES (2015) AVIS de l'Agence nationale de sécurité sanitaire de l'alimentation, de l'environnement et du travail relatif au risque Influenza aviaire.
<https://www.anses.fr/fr/system/files/SANT2015sa0241.pdf> Accessed 21/12/2015

ECDC (2015) Situation overview: highly pathogenic avian influenza virus A of H5 type
http://ecdc.europa.eu/en/publications/_layouts/forms/Publication_DispForm.aspx?List=4f55ad51-4aed-4d32-b960-af70113dbb90&ID=1411 Accessed 16/12/2015

Ministère de L'Agriculture, France (2015) Avian Influenza : the current situation in France.
<http://agriculture.gouv.fr/influenza-aviaire-la-situation-actuelle-en-france> Accessed 23/12/2015.



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