

## Preliminary Outbreak Assessment

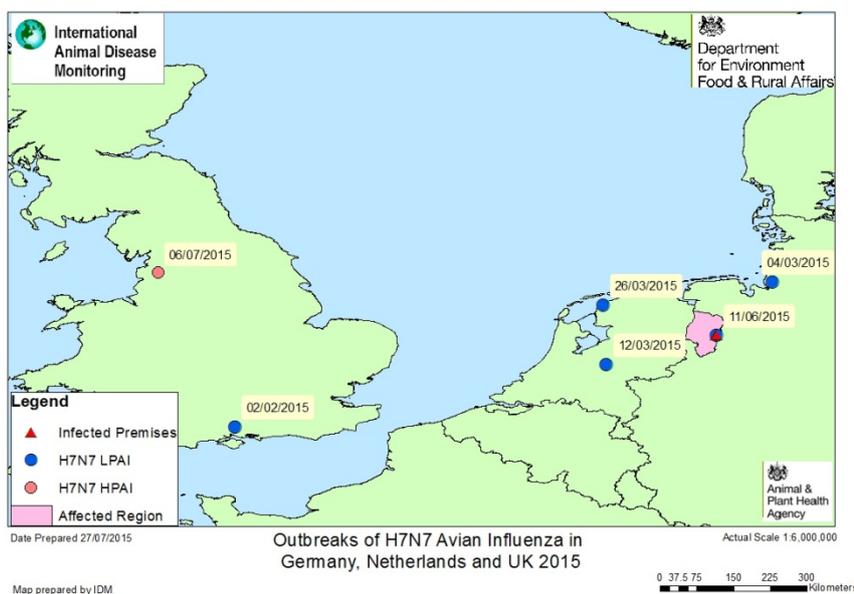
# Highly Pathogenic Avian Influenza H7N7 in poultry in Germany

29 July 2015

Ref: VITT/1200 HPAI H7N7 in Germany

## Disease Report

Germany has reported an outbreak of highly pathogenic avian influenza, H7N7 in poultry in North West Germany (Lower Saxony) (European Commission, 2015; OIE, 2015). The



holding was comprised of over 10,000 laying hens and clinical signs were first reported on 24/7/2015. Disease control measures are in place, including 3km and 10km protection and surveillance zones in line with Directive 2005/94/EC. The birds have been depopulated. The outbreak was located less than 1km from a premises which had reported H7N7 LPAI on June 11<sup>th</sup> 2015 and this new IP

tested negative in the course of disease investigations into LPAI. Further analyses may reveal the relationship if any between the two events.

## Situation assessment

In the last few months there have been several reported outbreaks of H7N7 avian influenza viruses in poultry in Europe. The UK had a low pathogenicity strain in February, Netherlands had two outbreaks of LPAI in March and April while Germany had two outbreaks of LPAI in both March and June. The June outbreak in Germany was in the same region as the latest HPAI incident.

Meanwhile on the 6<sup>th</sup> July, the UK reported an outbreak of H7N7 HPAI in laying hens. Investigations into this outbreak have revealed a mutation event occurred within the poultry premises, following an incursion of LPAI. The most likely source of infection was

contact with wild birds, given the presence on the farm of nesting wild waterfowl and two ponds. The full epidemiology report will be available soon at [www.gov.uk](http://www.gov.uk).

It is of no surprise that H7 LPAI viruses have been detected this year, as these viruses are continually circulating in wild waterfowl and therefore there is a constant low risk of incursion of these viruses into poultry. However, the mutation of LPAI to HPAI viruses is a rare event. Several factors may drive these mutation events: a “jump” from Anseriform birds into Galliform poultry; adaptation to Galliform poultry; repeated passage through the poultry; spread within the poultry (free range birds as opposed to caged birds where mixing between birds is reduced) that acquire LPAI virus immunity that then acts to exert selective pressure and possibly the age of the birds.

In the last 10 years, there have been only four such documented events of mutation from LPAI to HPAI occurring all within chicken layers in Europe: UK in 2008, Spain in 2009 (SCoFCAH, 2010), Italy in 2013 and UK in 2015; all involved H7N7. In the case of the UK mutation event in 2008, mallard ducks present at the premises and in contact with free range laying hens seemed to be the source for the LPAI incursion with subsequent mutation following sustained transmission within the flock. In Spain, the incursion of LPAI was believed to be from wild waterfowl on a nearby reservoir which was the water source for the farm and the mutation consequently occurred in one of four sheds of laying hens (SCoFCAH, 2010). In Italy the virus was introduced to free range hens as LPAI and mutated to HPAI during transmission within the flock. It remains to be seen if the same event has occurred in Germany, but given the circulation of LPAI demonstrated recently, this would seem highly probable. Surveillance sampling in the event of an outbreak only gives a level of confidence for finding over a certain prevalence, therefore occasionally there may be a possibility that additional cases which have gone undetected if incursion at the time of sampling is relatively new.

According to TRACES, the EU Electronic Trade Notification System, there has been no recent trade of live poultry, hatching eggs or day old chicks from this region to the UK. Meat and table eggs are lower risk commodities and provided they are not diverted from the human food chain, do not represent a risk to poultry. Public Health England has confirmed that this strain, H7N7 HPAI, is a very low risk to public health (<https://www.gov.uk/government/news/suspect-case-of-avian-flu-bird-flu-at-lancashire-farm>).

## Conclusion

We would like to take the opportunity to highlight the “testing for exclusion” regime in GB. Where avian influenza (or Newcastle Disease) is **not** strongly suspected, a poultry keeper and their private veterinarian now have access to a testing service at the National Reference Laboratory, Weybridge. This will help detect a notifiable avian disease at the earliest opportunity for those cases. It is aimed at those cases where clinical signs cannot exclude NAD in a differential diagnosis and yet do not justify a consultation case or official

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inquiry. For more information, please see Gibbens *et al.* (2014) and [www.defra.gov.uk/ahvla-en/disease-control/nad](http://www.defra.gov.uk/ahvla-en/disease-control/nad)

This particular event does not increase the risk to the UK. We are already on heightened risk level (albeit still low) for further incursions to occur in the UK poultry sector. This has been in place since November 2014 when H5N8 HPAI was circulating in wild birds.

We will continue to report on the situation. We would like to remind all poultry keepers to maintain high standards of biosecurity, remain vigilant and report any suspect clinical signs promptly. Poultry keepers should also remind themselves of the mild clinical signs of LPAI infection and be aware of any changes in egg production, feed and water intake or rise in mortality.

## Authors

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