

Preliminary Outbreak Assessment

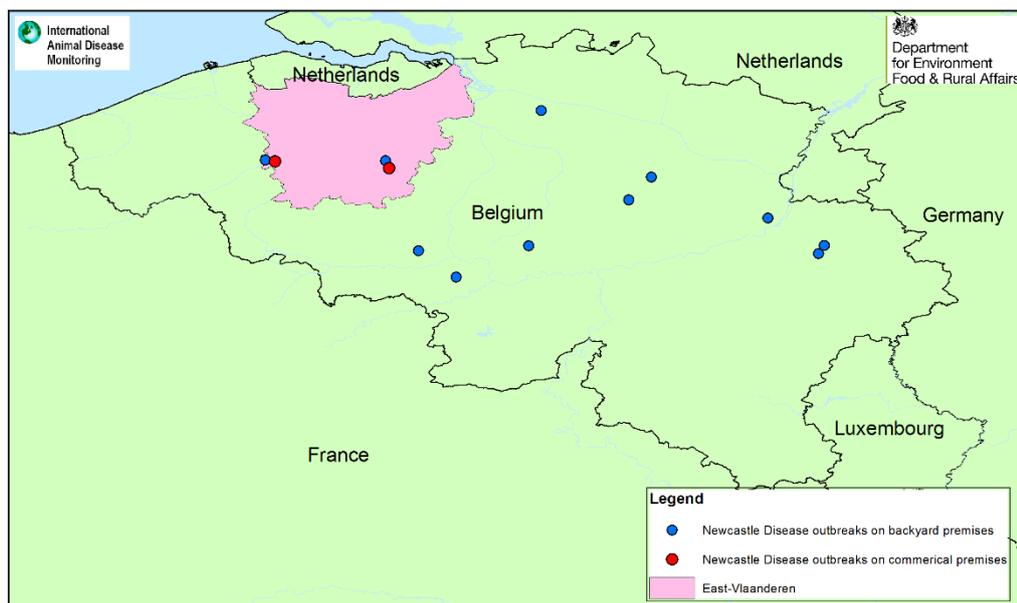
Newcastle disease in Belgium

16th July 2018

Ref: VITT/1200 ND in Belgium

Disease report

In July, two outbreaks of Newcastle Disease (ND) have been reported in commercial poultry at premises in East Flanders in Belgium (OIE, 2018 and Belgian FASFC (2018)). One premises had >3,600 poultry present and was reportedly a dealer in hobby birds, according to the Belgian Authorities. The second outbreak was in a much larger commercial premises with approximately 60,000 poultry and, according to the disease report, fewer than 10% of birds showed severe clinical signs or mortality (OIE, 2018). In addition to this, since June, the Belgian Authorities have reported ten outbreaks of Newcastle Disease (ND) at hobbyist poultry keeper premises in Liege, Antwerp, Hainaut, Brabant Wallon, Brabant Flamand, East Flanders and West Flanders. For each of these reported cases in non-commercial poultry, there are no commercial poultry premises within the 500m zone. The birds on each premises are kept in captivity. The species of birds



Newcastle Disease outbreaks in Belgium and Luxembourg, 2018

Map prepared by IDM

Actual Scale 1:3,500,000

0 10 20 40 60 80 Km

affected, and the species of birds kept at each of the premises have not yet been reported. According to the reports made by the Authorities at the EU Standing Committee on the Plants, Animals, Food and Feed Animal Health

meeting, (PAFF, 2018), any birds showing clinical signs are being euthanased, while other birds present are being vaccinated.

There was also a report of ND in Luxemburg in May, at a location on the border with Belgium, at a premises with 13 hobby birds, and one in Belgium on the 26th April in Liege, also in hobby birds.

Situation assessment

Newcastle Disease is a serious notifiable disease of poultry which can cause large losses in unvaccinated domestic poultry, particularly chickens. It is considered endemic in many countries in Central and South America, Asia, the Middle East and Africa and is occasionally reported in Europe most often in backyard systems in the east. The causative agent, avian avulavirus type -1 (formerly Avian Paramyxovirus-1) is highly variable in its ability to infect different avian species and to cause differing severity of disease. The most virulent form causes an acute, lethal infection in chickens and is referred to as velogenic or highly virulent (AAvV1 termed ND). In terms of the diagnostic tests, the intracerebral pathogenicity index (ICPI) is the gold standard for pathogenicity determination and often velogenic viruses have an ICPI approaching 2.0 (all infected birds die within 24 hours). ND is transmitted most often by direct contact with diseased or carrier birds. Infected birds may shed the virus in their faeces, contaminating the environment. Transmission can occur by direct contact with faeces and respiratory discharges or by contaminated food, water, equipment, and human clothing. Newcastle disease is a mild zoonosis (disease of animals that can also infect humans) and can cause conjunctivitis in humans, but the condition is generally very mild and self-limiting.

Several genetic lineages within the AAvV-1 group of viruses have been reported in recent years in the EU. Amongst the virulent strains are the genotypes VII (or lineage '5') XIII (5b lineage) and VI (lineage 4, primarily associated with pigeons). A new subgroup of genotype VII emerged in Europe in 2013 and subsequently spread, being associated with outbreaks in Bulgaria, Romania and the Republic of Cyprus. The rapid spread of a virus, shown to have derived from the Middle East/Central Asia region, was assumed to be as a result of human activity rather than wild bird mediated spread (Fuller et al, 2015) but to date has largely been associated with 'backyard' production. Anecdotally the virus has also been reported in flocks that were ND vaccinated but substantive data is either limited or lacking. The largest commercial premises where ND has been reported had approximately 60,000 poultry. Of these, around 6,000 were reported dead. In Belgium, vaccination against ND is mandatory. Given this low mortality rate, we understand (pers communication, ND EURL) that there may be issues with the vaccine and its match/level of efficacy to this relatively new strain of the virus in Europe.

The majority of the Belgian cases are in hobby keeper premises which raises the question around whether they are linked to a dealer or market, explaining the wide spread distribution in Belgium. Further, the use of vaccine whilst required in Belgium in this sector is difficult to assure.

Preliminary genetic analyses conducted at the EURL in conjunction with colleagues from the Belgian and Luxembourg NRLs for ND reveal the virus is closely related to contemporary strains from the east of Europe. This raises questions on the possible spread pathway, whereby this strain of virus has been introduced to North and Western Europe for the first time. The virus appears to have been introduced into birds and possibly spread through the local market system in a partially vaccinated population. The precise source is at present unknown but pathways other than wild birds should also be considered.

In terms of trade, since 1st June we have received 7 consignments of live poultry (turkeys, chickens and pheasants) and three of gamebirds from Belgium (total of 17,265 poultry and 12,000 gamebirds). Two of these consignments have been from East Flanders, where the ND outbreaks in commercial premises have been reported.

However, as the majority of outbreaks are not being reported in commercial poultry, it is of note that small consignments of fewer than 20 birds (that is poultry rather than pet birds), which may be typical of the hobby keeper, should be accompanied by a Intra-community trade health certificate relating to the flock of origin and by pre-notification in TRACES for intra-community trade. This certification may not include the details of the dealer's establishment and, indeed, the time since the birds left the flock of origin may be of little relevance if the birds have been mixing in a show, at a gathering or a dealer's premises. The precise host range of this virus is uncertain but gamebirds do present a theoretical pathway for introduction, and imported pheasants were proven to be the source of an outbreak in southern England in 2005. Gamebirds can present atypically or even asymptotically when infected with strains of AA_vV-1 including some virulent for chickens.

Conclusion

As the variety of species of wild bird which may be susceptible and may act as a reservoir for ND is wide, we generally consider there is a constant low risk of introduction of the AA_vV-1 into the domestic poultry sector; hence the recommendation for poultry keepers to consider vaccinating their flocks. However, as a result of these new outbreaks, given the number, the level of contact in the sector and the concern over the vaccination status / vaccine matching to this strain of ND, we consider the risk to the UK for incursion of ND is now **MEDIUM** (that is, event occurs regularly). There are several pathways by which disease could be introduced to the UK: through the movement of live birds, the movement of wild birds, contact with fomites and contaminated equipment, clothing or transport or contact with infected meat and meat products.

We will continue to monitor the situation closely, as this is an important exotic disease which will be a concern for the EU in terms of its ability to spread and the impact on poultry.

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PAFF Committee 12-13 July 2018



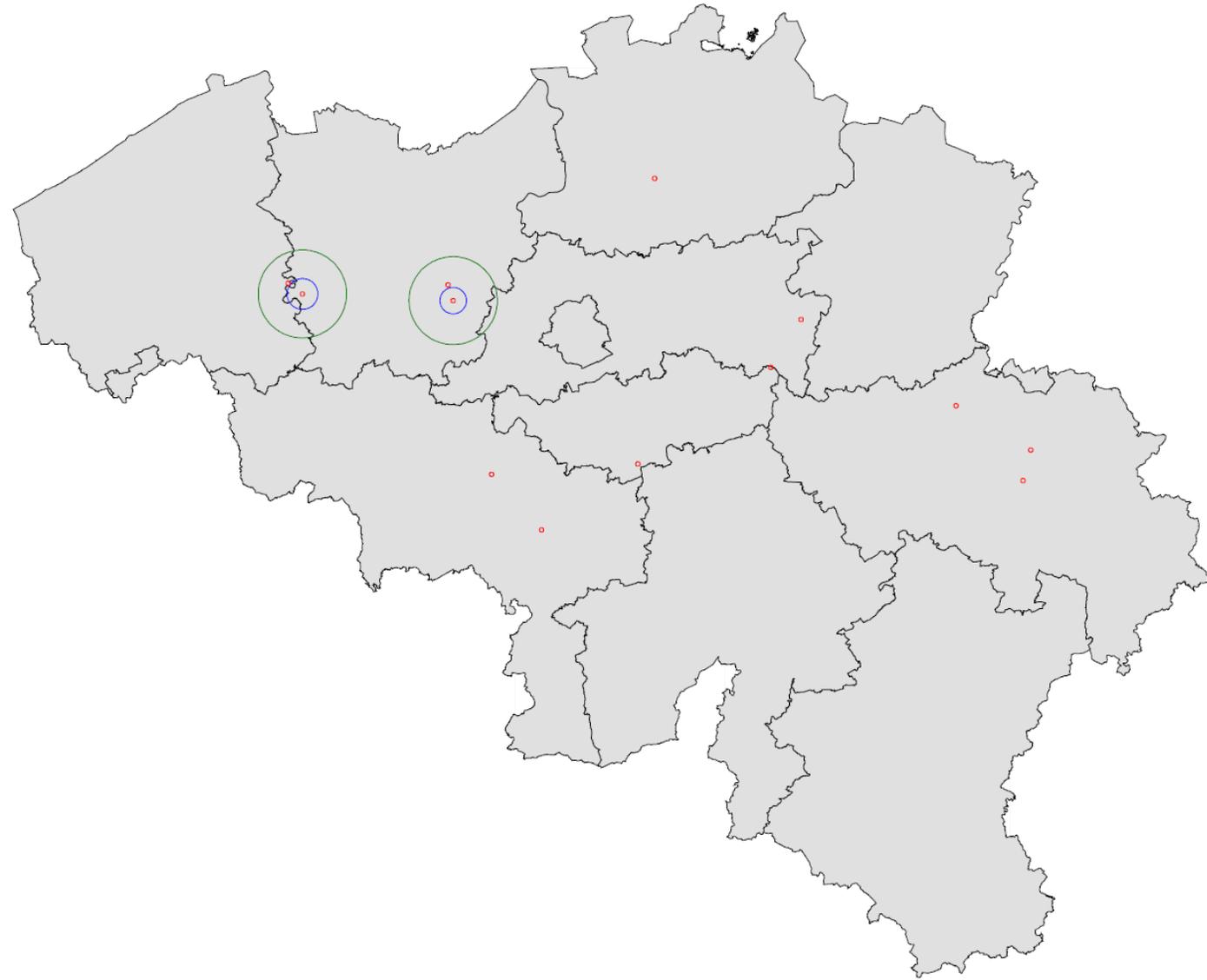
Overview

13 outbreaks/cases

- 11 cases in hobby poultry including 1 small dealer and 1 pet shop
- 1 outbreak in a hobby poultry dealers premises
- 1 outbreak in a commercial farm with laying pullets



Overview



Case 1

- Hobby holding in Herstal, province of Liège
- 20 fancy chickens
- Date of confirmation: 26/04/2018
- No professional poultry farms in the 500m zone



Case 2

- Hobby holding in Kessel, province of Antwerpen
- 29 chickens
- Date of confirmation: 14/06/2018
- No professional poultry farms in the 500m zone



Case 3

- Hobby holding in Soignies, province of Hainaut
- 45 chickens, 40 guinea fowls
- Date of confirmation: 14/06/2018
- No professional poultry farms in the 500m zone



Case 4

- Hobby holding in Verviers, province of Liège
- 17 chickens
- Date of confirmation: 15/06/2018
- No professional poultry farms in the 500m zone



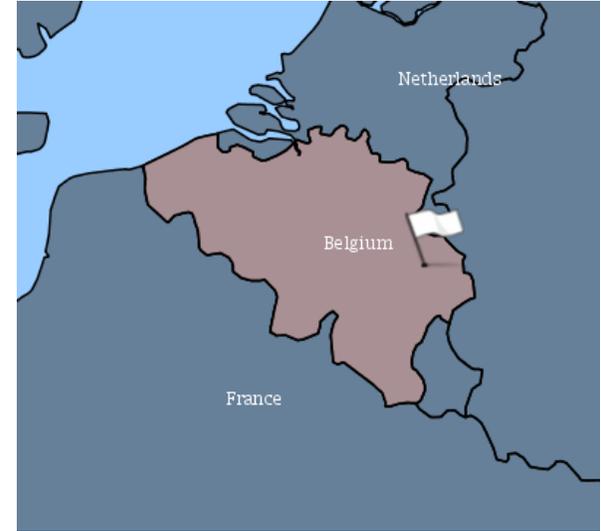
Case 5



- Hobby holding in Villers- la-Ville, province of Brabant Wallon
- 13 chickens
- Date of confirmation: 22/06/2018
- No professional poultry farms in the 500m zone



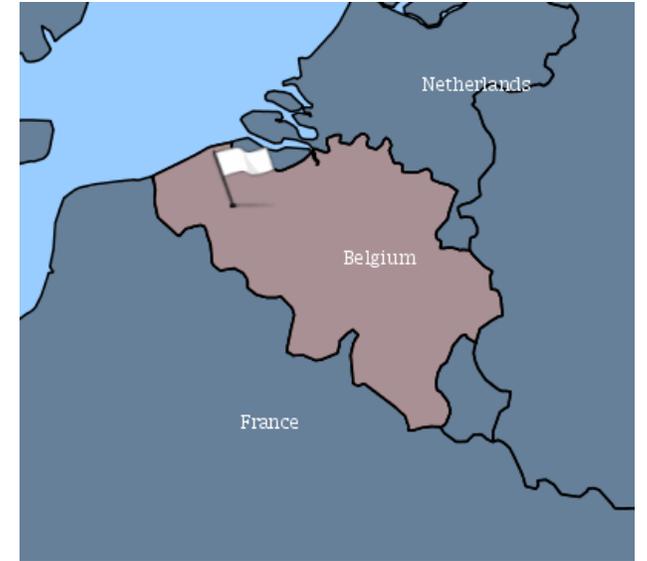
Case 6



- Hobby holding/pet shop in Theux, province of Liège
- 73 ducks, 10 geese, 1 partridge, 175 chickens, 6 pigeons
- No clinical symptoms!
- Date of confirmation: 25/06/2018
- No professional poultry farms in the 500m zone



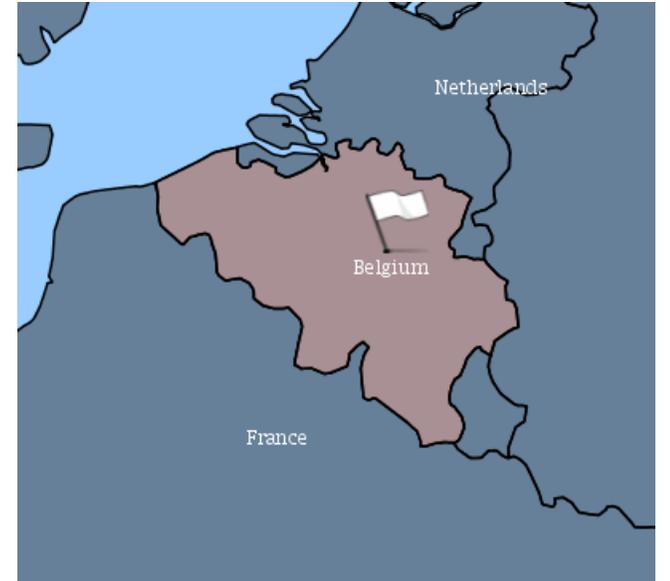
Case 7



- Hobby holding in Dentergem, province of West-Vlaanderen
- 5 chickens
- Date of confirmation: 25/06/2018
- No professional poultry farms in the 500m zone



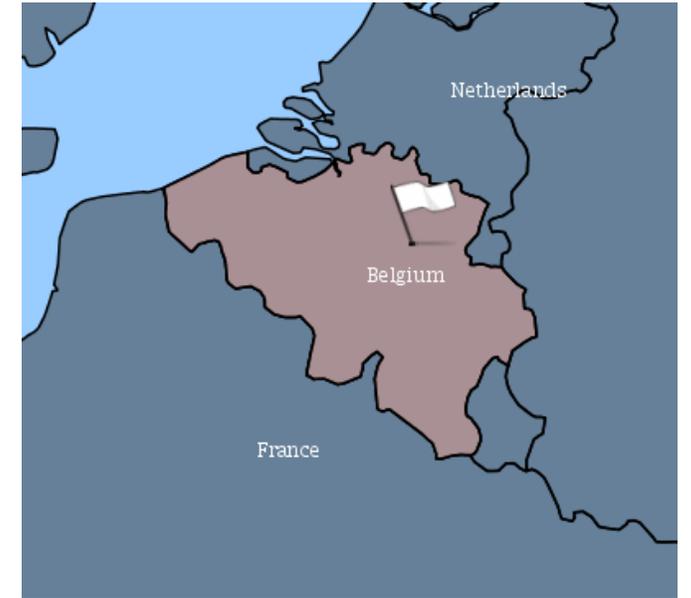
Case 8



- Hobby holding in Hélécine, province of Brabant Wallon
- 31 chickens
- Date of confirmation: 25/06/2018
- No professional poultry farms in the 500m zone



Case 9



- Hobby holding/small dealer in Zoutleeuw, province of Vlaams-Brabant
- 130 chickens
- Date of confirmation: 27/06/2018
- No professional poultry farms in the 500m zone



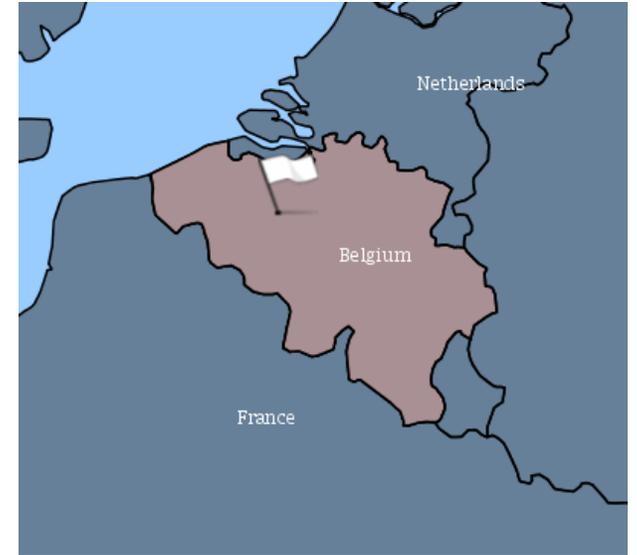
Case 10



- Hobby holding in Erpe-Mere, province of Oost-Vlaanderen
- 160 chickens
- Date of confirmation: 27/06/2018
- No professional poultry farms in the 500m zone



Outbreak 11



- Dealer of hobby poultry in Haaltert, province of Oost-Vlaanderen
- 3648 birds of all kind of poultry breeds and species
- Date of confirmation: 4/07/2018
- No clinical symptoms!
- 3 and 10 km zone
- 9 professional poultry farms in the 10 km zone



Case 12



- Hobby holding poultry in Morlanwelz, province of Hainaut
- 121 chickens
- Date of confirmation: 6/07/2018
- No professional poultry farms in the 500m zone



Outbreak 13



- Commercial farm with laying pullets in Zulte, province of Oost-Vlaanderen
- 57 820 laying pullets (3 flocks, born 22/03/2018, 12/04/2018, 06/06/2018)
- Date of confirmation: 7/07/2018
- 3 and 10 km zone
- 12 professional poultry farms in the 3 km zone
- 45 professional poultry farms in the 10 km zone



Measures in captive birds

- according Directive 92/66/EEG (article 19)
 - Holding under official control
 - Confinement, ban on movement of birds kept in captivity outside the holding for at least 60 days after the clinical signs disease have disappeared
 - Destruction or treatment of any matter or waste likely to be contaminated
 - Epizootiological inquiry
 - Revaccination
 - No contacts with other holdings



Restriction zone (500 m)

- Inventory of poultry and other birds
- Movement ban of poultry, birds and hatching eggs
- Feeding and drinking only inside
- No commercial poultry in the zone
- Vaccination



Measures in commercial farms

- according Directive 92/66/EEG
 - Holding under official control
 - Stamping out
 - Destruction or treatment of any matter or waste likely to be contaminated
 - 3 and 10 km zone
 - Epizootiological inquiry
 - No contacts with other holdings



Epizootiological inquiry

- Hobby poultry: in most cases recent purchase
- 1 professional and 1 small dealer involved
- Ongoing



National measures

- Preventive measures permanently in place
 - Feeding and drinking inside for commercial poultry farms and also for non commercial holdings in higher risk zones
 - No outdoor access or at least protection by nets for commercial poultry in higher risk zones
 - Additional conditions for markets etc.
- Raising awareness of farmers and vets (newsletter)



National measures

- Extraordinary measures of FASFC from 2 July on for 30 days
 - All assembly, exhibition and trade of hobby poultry is prohibited



Issues

- Trade of hobby poultry
- Efficiency of vaccination
- Wild birds

