Ref: VITT1200/ND-FN

NEWCASTLE DISEASE OUTBREAK

IN

FINLAND

Prepared by:

Mirzet Sabirovic
Simon Hall

Approved by:

Nigel Gibbens

DISCLAIMER: These assessments should not be used as sources of reference. IAHD reserves the right to make changes based on new information.

Table of Contents

1 Summary

An outbreak of Newcastle disease (ND) was confirmed in a commercial turkey flock in the south west of Finland (Satakunta region). Presence of the disease was suspected on 18 June 2004. The flock is subject to depopulation. The disease was officially reported on 20 July 2004.

The outbreak was caused by a paramyxovirus type 1 (PPMV-1) with an intracerebral pathogenicity index (ICPI) of 1.6. This is above the level of pathogenicity (0.7) which defines that infection with a natural strain of the virus must be reported and controlled under EU rules.

The outbreak was detected as a part of routine surveillance. Initial information indicates that the outbreak was confined to this single flock. Finland has implemented disease control measures according to EU rules.

The UK has not imported live birds, poultry meat and hatching eggs from Finland during the estimated six weeks risk period before the date when the disease was suspected, or subsequently.

While an outbreak of ND disease in any Member State is of concern, the Veterinary Directorate considers the risk of the disease spread from this outbreak to UK via legal trade to be negligible. Although this outbreak poses a negligible risk to UK animal health, it highlights the background risk to commercial poultry posed by feral pigeons and wildfowl, and migratory birds as potential carriers of ND.

2 NEWCASTLE DISEASE - FINLAND

2.1 Disease Report

On 20 July, Finland notified the EU and the OIE of an outbreak of ND in Satakunta region in the south-west of Finland (Fig.1). The outbreak occurred in a commercial turkey flock (fattening turkeys for slaughter) comprising of 12,000 turkeys. It was detected by routine surveillance.

The Finland's authorities reported that the affected flock will be depopulated in the near future. Epidemiological investigation is underway to determine the possible source of infection.

Fig.1. Finland – location of ND outbreak (July 2004)

Finland has reported that the presence of infection was detected by routine surveillance. No birds showed clinical signs. Laboratory testing, carried out by the European Community Reference Laboratory in Weybridge, UK, confirmed the presence of ND virus with an intracerebral pathogenicity index of 1.6.

3 LEGAL TRADE – CURRENT SITUATION

3.1 Live birds

TRACES, the European Commission electronic system for notification of movements of live animals, their products and germplasm within the European Union has no records of imports of live poultry or other birds from Finland to the UK after 1 May 2004. This is six weeks before 18 June 2004, the date when the disease presence was first suspected in Finland. Six weeks is twice the maximum incubation period for ND, as specified by the OIE.

3.2 Meat/meat products

Intra-community trade in poultry meat is not subject to border inspection controls or electronic notification of consignments. In the case of ND outbreaks, affected Member States are required to impose EU rules in the protection and surveillance zones around outbreaks. Imports of poultry meat are subject to EU rules. However, the available figures from the Customs (HMCE) suggest that imports of poultry meat from Finland to the UK are minimal.

3.3 Hatching eggs

TRACES has no records of imports hatching eggs from Finland to the UK after 1 May 2004. This is six weeks before 18 June 2004, the date when the disease presence was first suspected in Finland. Six weeks is twice the maximum incubation period for ND, as specified by the OIE.

3.4 Table eggs

Customs estimate that approximately 500 tons of table eggs from poultry are imported from Finland to the UK per annum.

4 NEWCASTLE DISEASE RESTRICTIONS IN PLACE

4.1 The situation in Finland

The last case of Newcastle disease (ND) in Finland was reported in September 1996. Finland prohibits the use of vaccination against ND.

Following the confirmation of ND on 20 July, Finland implemented protection and surveillance zones according to EU rules for the control of ND.

4.2 EU rules

EU rules (refer to Annex 2) prevent trade in poultry and other commercial or pet birds from areas under restriction or in meat derived from such birds. Poultrymeat products can be traded only if they are first subjected to treatment sufficient to destroy the virus. Table eggs can be traded from holdings not under suspicion of being infected, subject to normal community hygiene rules.

5 ASSESSMENT OF THE RISK TO THE UK

On the basis of current information on the outbreak of ND in Finland, the Veterinary Directorate presently considers that with regard to:

5.1 Legal trade in:

5.1.1 Live poultry/birds

- The risk is negligible as no live poultry or birds have been imported from Finland during the estimated risk period.

5.1.2 Poultry meat/meat products

- The risk of the disease introduction to the UK is negligible.

Comments: Virus may be present in fresh and frozen meat. The virus is stable at pH between 3 to 9. Its survival is unlikely to be affected be affected by pH changes of meat after slaughter. The virus survives freezing up to 2 years. However, the virus is susceptible to various heat treatments (56^0C/5 minutes to 6 hours; 60^0C/7-30 minutes; 70^0C/50 seconds; 100^0C/1 second) (various reports in Christensen et al., 1999)

The outbreak was detected by routine surveillance. At this stage, it appears that this outbreak is limited to the affected flock only. There is no indication on how long the virus may have been present in this flock. However, the fact that routine surveillance detected only one affected flock suggests that the virus may have not been present in the area for a long time. It is unlikely that fresh meat produced from turkeys raised in this area was imported into the UK. The actions taken by the Finland's authority appear to be swift. Meat for Intra-Community trade must come from birds that are subject to veterinary inspection.

The only risk of imported poultry meat from Finland to the UK to cause an outbreak of ND in the UK would be that posed by raw waste. Waste from commercial processing plants in the UK is subject to strict controls. That is, such waste must be stored, handled and disposed according to animal by-products regulations. Such waste must be rendered, incinerated or processed for pet food. It cannot be disposed directly to landfill where it could become accessible to wild birds or backyard poultry.

Meat for human consumption will be cooked. This will destroy the virus. The amount of uncooked kitchen waste would be small.

5.1.3 Hatching eggs

- The risk is negligible as no hatching eggs have been imported from Finland during the risk period (the past two and a half months).

5.1.4 Table eggs

- The risk is negligible as there is no evidence of the disease in poultry laying flocks

5.2 Wildfowl

- The risk of the introduction of the Finish ND strain to the UK by (i.e. wildfowl) is difficult to quantify. However, the type of risk posed is unlikely to exceed the level of the existing (and unmanageable) background risk posed by wild birds migrating to, or through, the UK.

6 CONCLUSION

Finland has reported that the outbreak was in a single commercial turkey flock, found by routine surveillance. There are no reports of localized spread of disease amongst other commercial poultry flocks.

The Veterinary Directorate continues to monitor the situation and will re-assess the hazard if new information becomes available.

An outbreak of ND in any Member State is of concern. Although this outbreak poses a negligible risk to UK animal health, it highlights the background risk to commercial poultry posed by feral pigeons and wildfowl, and migratory birds as potential carriers of Newcastle disease.

7 References:

Christensen, B.A., S.C. MacDiarmid, N.J. Murray, H.J Pharo, and M. Sabirovic. Import risk analysis: Chicken meat and chicken meat products; Bernard Matthews Foods Ltd turkey meat preparations from the United Kingdom. MAF Regulatory Authority, Wellington, New Zealand, 1999.

8 Annex 1. Background note on Newcastle Disease

Newcastle disease (ND) is a viral disease affecting a wide range of bird species, including domestic poultry and many wild and migratory birds in which a long term carrier state may exist. It is an endemic disease in a number of countries throughout the world. The last outbreak in the UK occurred in 1997.

ND causes respiratory and/or nervous signs with gasping and coughing, drooping wings, dragging legs, twisting of the head and neck, circling, depression, inappetence and complete paralysis. There may be swelling of the tissues around the eyes and in the neck and a partial or complete cessation of egg production. Eggs from diseased birds may be misshapen, rough-shelled, thin-shelled and contain watery albumen. The birds may have a greenish watery diarrhoea.

The degree to which birds become affected and the mortality within a flock depend on virulence of the virus strain, degree of vaccinal immunity, environmental conditions, and condition of the flock .

Like avian influenza (to which the Newcastle disease virus in NOT related), the disease is primarily spread by contact with faeces or respiratory secretions from infected birds. Contaminated feed or water may also spread the disease. It is the movement of contaminated people, vehicles and things between flocks that is most likely to spread disease. Flock owners should always follow the principles of good biosecurity already published on the Defraweb http://defraweb/animalh/biosecurity/farmguidance/poultrybiosec.pdf

Unlike avian influenza, an effective commercial vaccine is available. Because of the constant threat of introduction of disease by wild birds, breeding flocks and commercial egg laying flocks (which have a life expectancy of some 60 – 72 weeks) are invariably vaccinated. Broiler flocks tend not to be for two reasons: first the cost and effectiveness of vaccination set against their relatively short life; second, the potential adverse effect on bird health of adding to the list of vaccines these birds are already subject to and which have to be given when they are newly hatched.

To a large extent, therefore, the National flock has a good degree of protection against incursion of disease. There are a number of Newcastle Disease vaccines authorised for use on the market in the UK and there are no restrictions on their use in accordance with any Marketing Authorisation.

9 Annex 2. ND – Detailed EU rules

The Council Directive (92/66) defines control measures against ND in poultry, racing pigeons and other birds in captivity. It does not apply if ND is detected in wild birds.

9.1 Initial investigation

Following a suspicion of ND, an affected holding is quarantined and movement of poultry, poultry meat, animal feed and litter/manure from the affected holding is prohibited. During this phase, transport of eggs destined for further processing in an approved establishment may be allowed. These measures remain in place until the disease is either ruled out or confirmed.

9.2 ND confirmation

If ND is confirmed (any PMV1 with an intracerebral pathogenicity index in day-old chicks greater than 0.7), the following measures apply:

9.2.1 Protection zone

A Protection zone must be established around the infected holding. This zone has a minimum radius of 3km.

9.2.2 Affected holding

All birds on the affected holding must be killed and destroyed. The meat of slaughtered poultry during the presumed incubation period must be traced and destroyed. The same applies to hatching eggs and table eggs. Poultry that have already been hatched are subject to official surveillance. Table eggs may be exempted from destruction if proper disinfection was carried out. Any waste is subject to traceability and appropriate treatment to destroy the virus. If that is not possible, such waste is destroyed. Cleaning and disinfection of the holding, equipment and transport vehicles must be thoroughly carried out. Any neighbouring and other identified traceforward holdings may be subject to the above measures.

If the virus has an intracerebral pathogenicity index (ICPI) of >0.7 and <1.2, the holding may be exempted from above measures if the European Community Reference laboratory considers that an outbreak was caused by a vaccinal strain of the virus. In these cases, the affected holding is placed under official surveillance for 30 days, and remains quarantined with restrictions imposed on all movements. Appropriate cleaning and disinfection is required. Poultry may be sent to slaughter, however they must be kept and slaughtered separately. Meat of such poultry is given a special health mark and must be subjected to a specified heat treatment, or sold only on the national market.

9.2.3 Surveillance zone

The surveillance zone that surrounds a protection zone must be established taking into account geographical, administrative, ecological and epidemiological factors relevant to ND. This zone includes the protection zone and has a radius of at least 10km from the affected holdings.

All poultry holdings within surveillance zone must be subjected to clinical examination and laboratory testing. Movement restrictions must apply to poultry handlers, poultry, poultry meat, hatching eggs, litter/manure, and transport vehicles. Poultry may be sent directly to slaughter at an approved establishment. This poultry meat is subject to a special health mark and must be subjected to a specified heat treatment, or sold only on the national market. Cleaning and disinfection activities must be carried out under official supervision. Fairs, markets, shows or other gatherings of poultry and other birds are prohibited.

Vaccination of poultry and commercial pigeons is subject to authorisation of the competent authority.