Newcastle Disease

Information Leaflet

Newcastle Disease

Background
Newcastle disease is a highly contagious disease of birds caused by pathogenic strains of avian paramyxovirus type 1 (PMV-1). A strain of PMV1 that causes pigeon paramyxovirus can also infect poultry causing Newcastle disease.

Geographical distribution
Low pathogenic (or lentogenic) strains of the virus are worldwide in their distribution. Highly pathogenic (or velogenic) strains are endemic in areas of Mexico, Central and South America, widely spread in Asia, the Middle East and Africa, and in wild cormorants in the US and Canada. A pandemic of pigeon paramyxovirus that commenced in the 1980s has affected many countries worldwide, including Ireland. Outbreaks of pigeon paramyxovirus still occur in Ireland from time to time. The last outbreak of Newcastle disease in poultry in Ireland occurred in 1997.

Species affected
Newcastle disease virus has been detected in most avian species (domestic and wild). Of domestic poultry, chickens are highly susceptible to disease. Game birds (pheasants, partridges, quail and guinea fowl) and parrots vary in susceptibility. Wild birds and waterfowl may harbour virus sub-clinically.

Risk to humans
Humans can be infected with Newcastle virus, and infection generally causes conjunctivitis or a flu-like illness that is self-limiting. Those affected are usually workers in the poultry industry or laboratory technicians who handle the virus. There is no evidence of transmission to humans through handling or consumption of poultry products.

Transmission
The virus may be present in live birds, their products (meat, eggs, feathers), carcases or faeces. Infection is most likely to result from contact with wild birds, infected poultry or poultry products or from contaminated clothing and footwear, vehicles, equipment, feed, water, manure or litter.
Clinical signs
The clinical signs in affected birds can be very variable. The disease can be present in a very acute form with sudden onset and high mortality, or as a mild disease with respiratory distress or a drop in egg production as the only detectable clinical signs. Disease may also be sub-clinical. Clinical signs include:

- Respiratory signs (gasping, coughing)
- Nervous signs (drooping wings, dragging legs, twisting of the head and neck, circling, complete paralysis)
- Loss of appetite
- Dropped or complete cessation of egg production
- Misshapen, rough-shelled, thin-shelled eggs containing watery albumen
- Greenish watery diarrhoea

Reporting suspicion of Newcastle disease
It is obligatory to notify any suspicion of this disease to your Regional Veterinary Office. See list at: https://www.agriculture.gov.ie/contact/ or call our out of hours hotline 1850200456.

Do not move any poultry, carcase or anything else (e.g. feed or waste) until a Department of Agriculture veterinary inspector has carried out an examination. If you have any doubts about the health of your flock, contact your veterinary practitioner.
Control
Council Directive 92/66/EEC lays down measures for the control of Newcastle disease. If Newcastle disease is suspected or confirmed in poultry or other captive birds various disease control measures would come into effect on the premises and in restricted zones in the surrounding area.

If Newcastle disease is confirmed in poultry:
- All poultry on the infected holding will be killed
- A 10km restricted zone will be declared around the holding
- Controls on the poultry industry will apply in the zone for at least 30 days
- Gathering of birds (including pigeon racing) may be affected

If Newcastle disease is confirmed in pigeons or other captive birds:
- Birds must be kept in the premises for 60 days after clinical signs disappear
- The premises must be cleaned and disinfected

Further details are set out in advice leaflets “Information on Newcastle Disease Control Measures” and “Information Leaflet for Pigeon Owners”.

Vaccination
Newcastle disease vaccines have been authorized in Ireland for use in poultry since 1997, and are routinely used in chickens and turkeys reared for egg production. When buying poultry, it is important to know if they are vaccinated against this disease.

People who own or keep racing pigeons are required by law to vaccinate their birds against paramyxovirus. In addition people who organise shows or races involving racing pigeons are obliged to ensure that birds entered for the event have been vaccinated.

A compulsory vaccination zone may be imposed in the event of an outbreak of Newcastle disease.

Trade implications
Trade in poultry and poultry products may be affected by outbreaks of Newcastle disease.

Biosecurity advice
Measures that can be taken to prevent the introduction and spread of disease in poultry flocks may be found in advice leaflet “Biosecurity Information for Registered Poultry flock owners”.

Registration of flocks
All birds that are:
- reared or kept in captivity for the production of meat, eggs or other commercial products, for restocking supplies of game or for breeding these types of bird, or
- other captive birds kept in the course of business or for sporting purposes
are required by law to be registered with under the Diseases of Animals Act 1966 (Registration of Poultry Premises) Order 2008 as amended.

Registration is free, and forms may be found on the Department’s website at: https://www.agriculture.gov.ie/avian_influenza/poultryregistration/

Applications must be submitted to your Regional Veterinary Office. See link to contact details above, under Reporting suspicion of Newcastle disease.

Flock owners are required to keep a record of bird mortalities, egg production, food and water intake and purchases, sales and supplies of hatching eggs or birds.

Photos: Department of Agriculture, Food and the Marine

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