



# COUNCIL DIRECTIVE 2006/88/EC DISEASE INFORMATION LEAFLET

## INFECTIOUS HAEMATOPOIETIC NECROSIS

### BACKGROUND

- Infectious haematopoietic necrosis is caused by a single stranded RNA virus of the family *Rhabdoviridae*, genus *Novirhabdoviridae*. IHN is listed as a non-exotic disease under EU Directive 2006/88/EC, and is notifiable in Ireland, according to S.I. No. 261 of 2008.
- IHN was first reported in North America in the 1950's and has since been reported in Japan and continental Europe.
- Horizontal transmission of the virus is the main cause of disease spread through direct contact between fish or by virus shedding from infected fish.
- IHN primarily affects all salmonid species in both marine and freshwater, with fry and fingerlings particularly susceptible.
- Ireland has been officially declared free of IHN, by Commission Decision 2009/177/EC

### CLINICAL SIGNS

- Infected fish are often lethargic, with occasional bouts of frenzied abnormal activity.
- Externally, skin darkening, pale gills, extended abdomen, exophthalmia and petechial haemorrhages can be observed.
- Internally, fish are anaemic, with a pale liver, spleen and kidney.
- Haemorrhaging, oedema and impaired osmotic balance are often observed in the final stages of infection.
- Clinical disease typically occurs between 8 and 15°C and cumulative mortality in acute outbreaks may exceed 90% with protracted losses observed in chronic outbreaks.



## DIAGNOSIS

- The 'Gold Standard' for detection of IHN is virus isolation in cell culture followed by immunological and/or molecular detection.
- Histopathologically, the disease is characterised by degenerative necrosis of the haematopoietic tissues, kidney, spleen, liver, pancreas and digestive tract.
- Molecular diagnostics have identified three genogroups of the IHN virus: U, M and L. European isolates all belong to the M genogroup.

## CONTROL

- A DNA vaccine against IHN is currently approved for use in Canada.
- Vaccination against IHN is not permitted in areas of the EU which have been declared disease free.
- Control measures focus on prevention through disinfection of fertilised eggs, use of virus-free water supplies, purchasing stock from disease-free sources and strict biosecurity measures.
- A range of disinfectants are effective against the IHN virus e.g. sodium hydroxide, chlorine and iodine based compounds.

## WHAT SHOULD I DO?

- The Marine Institute must be notified in the event of unexplained mortality or the suspicion of a notifiable disease.
- Strict biosecurity measures should be implemented at and around the infected site, in collaboration with the Marine Institute and the retained veterinary practitioner.
- No movements of aquatic animals, whether dead or alive, are allowed without the authorisation of the official service.
- The Marine Institute will confirm or rule out the presence of a listed disease.
- If the presence of the disease is confirmed, aquaculture animals should be harvested/culled as soon as possible to avoid the spread of the disease.

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