

AQUAPLAN DISEASE INFORMATION LEAFLET

INFECTIOUS PANCREATIC NECROSIS

BACKGROUND

- Infectious Pancreatic Necrosis (IPN) is a highly contagious systemic disease, caused by a double stranded RNA virus of the family *Birnaviridae*.
- IPN virus infects all salmonid species and is commonly found in salmonid farming countries such as Scotland, Norway, Canada and Chile.
- Aquatic birnaviruses have a wide host range infecting many species of fish and have been isolated from fish species belonging to over 32 families.
- IPN causes mortalities primarily in young salmonids and in smolts shortly after transfer to sea.
- IPN is known to have occurred in Ireland for many years.

CLINICAL SIGNS

- There is usually a sudden and progressive increase in daily mortalities.
- Affected fish are generally lethargic, darker in colour and may exhibit abnormal swimming behaviour.
- Affected fish often have a distended abdomen, no food in the stomach and anterior intestine with a clear or milky mucous present.
- Fish may have long, thin, whitish faecal casts.
- The spleen, kidney, liver, heart and gills are usually pale.
- Blood spots may be present on the ventral fins, along the intestine and on the visceral fat with a bloody fluid in the body cavity.



DIAGNOSIS

- Histopathology shows focal necrosis of the pancreatic acinar tissue along with necrosis of the intestinal mucosa and the liver.
- The 'Gold Standard' for detection of IPNV is virus isolation in cell culture followed by immunological and/or molecular detection.
- Molecular diagnostics have identified seven genogroups of the virus based on geographical spread.
- Studies have shown that variations in the amino acid residues of the structural protein (VP2) are correlated with virulence.

CONTROL

- Commercial injection vaccines are available for protection of post-smolts and an oral vaccine is also in use for younger fish.
- Control measures should focus on prevention through disinfection of fertilised eggs, use of virus-free water supplies, purchasing stock from disease free sources and strict biosecurity measures.
- Although the IPN virus can be persistent, a number of chlorine and iodine based disinfectants and peroxygen compounds have been shown to be effective against the virus.

WHAT SHOULD I DO?

- Minimise potentially stressful procedures such as handling, moving and grading when IPN is suspected or confirmed.
- As IPN is not listed under Council Directive 2006/88/EC, control of the disease is a matter for the operator and the retained veterinary practitioner.
- Strict biosecurity measures should be implemented around the infected site.
- Remove moribund and dead fish from infected pens/tanks daily. Mortalities should be disposed of in accordance with current Animal By-Products Regulations.
- If the vet notices any change in the nature of the infection and suspects a more virulent disease is emerging or alternatively, if a disease is suspected in a new host species, you should contact the Fish Health Unit of the Marine Institute. If you suspect the presence of a listed disease you should also notify the Marine Institute.

