

AQUAPLAN

DISEASE INFORMATION LEAFLET

PANCREAS DISEASE

BACKGROUND

- Pancreas disease (PD) is caused by a single stranded RNA virus of the family *Togaviridae*, genus *Alphavirus* known as the salmonid alphavirus.
- PD is the most significant single infectious disease affecting marine salmon farming in Ireland and was first diagnosed here in 1984.
- PD was first reported in Scotland in 1976 and is now a significant economic disease for the salmon industries in Ireland, Scotland and Norway.
- The salmonid alphavirus also causes sleeping disease in rainbow trout and has been reported in France, UK, Germany, Spain and Italy.
- The disease has been reported to affect all age groups, although in Ireland it primarily affects salmon in their first year at sea.
- To date the virus has only been isolated from salmonid fish.

CLINICAL SIGNS

- Affected fish generally exhibit a sudden drop in feeding, become lethargic and anorexic.
- Fish may cease shoaling and remain high in the water column. As a result they become prone to secondary infections, parasites and water borne irritants.
- Occasionally fish may be seen circling or spiralling in the water. Fish may also be observed spitting out feed pellets. White/yellow casts are often observed in the water column and on the nets.
- Internally signs of PD are variable and often there are no obvious internal abnormalities.
- Fish may have no food in the gut and may have white or yellow intestinal casts. Occasionally there may be blood spotting on the visceral fat.



DIAGNOSIS

- Diagnosis of the disease has historically been based on histopathology.
- Confirmatory testing includes virus isolation in cell culture, serological testing on blood serum and molecular methods.
- Histopathologically, the disease is characterised by necrosis and fibrosis of the pancreatic acinar tissue as well as a range of myopathies in the heart and skeletal muscle.
- Molecular diagnostics have identified six sub-types of the salmonid alphavirus infecting farmed Atlantic salmon and rainbow trout in both the marine and freshwater environments.

CONTROL

- There are no treatments available to alleviate PD although dietary supplements may be of benefit.
- A commercial vaccine is available, however research into the development of new vaccines is ongoing.
- Regular screening of farmed stock should be used to identify early stages of infection.
- Fallowing, stock selection and holding only single year class generations in any one bay may help in reducing the occurrence and severity of the disease.
- The salmonid alphavirus is susceptible to extremes of pH and to temperatures $> 60^{\circ}\text{C}$. A range of commonly used disinfectants have been shown to be effective in inactivating the virus.

WHAT SHOULD I DO?

- Minimise potentially stressful procedures such as handling, moving and grading when PD is suspected or confirmed.
- As PD 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 a change in the nature of the infection and suspects a more virulent disease is emerging or alternatively, if the 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.

AquaPlan (Grant-Aid Agreement No. PBA/AF/08/003{01}) is carried out under the Sea Change strategy with the support of the Marine Institute and the Marine Research Sub-Programme of the National Development Plan 2007-2013, co-financed under the European Regional Development Fund.



Ireland's EU Structural Funds
Programmes 2007 - 2013
Co-funded by the Irish Government
and the European Union



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