

# AQUAPLAN

## DISEASE INFORMATION LEAFLET

### ICHTHYOPHTHIRIOSIS 'WHITE-SPOT DISEASE'

#### BACKGROUND

- The disease, also known as "Ich", affects most species of freshwater fish and has a worldwide distribution.
- The causative agent of 'white-spot' is the single cell protozoan parasite *Ichthyophthirius multifiliis*.
- The parasite infects the skin, gills and the lining of the oral cavity.
- The disease affects all age groups resulting in poor performance, severe damage to the skin and gills with heavy infestations resulting in mortality.
- The life cycle is temperature dependant, thus outbreaks are more severe at higher temperatures.
- Fish which recover from an infection can develop an acquired immunity.

#### CLINICAL SIGNS

- The feeding stage of the parasite occurs in the surface of the skin and gills where it can reach up to 1 mm in diameter and is seen as a white spot from which the disease takes its name.
- Affected fish are generally lethargic, darker in colour and respire rapidly.
- The fish may occasionally swim rapidly through the water and scrape their bodies on the bottom and sides of the tanks (flashing).
- There is an increase in mucus in the gills.
- Lesions produced by the parasites often result in secondary infections.



## DIAGNOSIS

- Gross observation shows many small white spots covering the skin and gills of the fish.
- Microscopic examination of skin or gill scrapes reveals the characteristic large, brown parasite with short cilia covering the entire surface and a characteristic horseshoe-shaped macronucleus.

## CONTROL

- Disease spread occurs when the feeding stages break out from the surface of the skin and gills, which then form cysts releasing numerous infectious ciliated tomites.
- Prolonged immersion in, or repeated, formalin baths.
- As the parasite cannot survive at salinities > 1 ppt, salt baths can be used to treat the disease. Salt may also help alleviate the osmotic stress caused by gill damage.
- Tank cleaning and siphoning will reduce challenge. Transferring fish to clean tanks will reduce re-infection.

## WHAT SHOULD I DO?

- Minimise potentially stressful procedures such as handling, moving and grading when 'white spot' is suspected or confirmed.
- As 'white spot' 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 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.

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