

RAINBOW TROUT GASTROENTERITIS

RESEARCH ON RTGE

A research project has now been underway for 3 years conducted through the Institute of Aquaculture, Stirling and funded by DEFRA, SARF and the BTA. The disease is very complex and this document does not aim to present all the findings. Our intention here is to present the most important information. While we are confident in these results; we are circulating them to you **before publication** in the hope they will help you to manage RTGE better this summer.

WHAT IS RAINBOW TROUT GASTROENTERITIS?

RTGE or “Gastro” is a contagious disease of rainbow trout. This disease usually develops as water temperatures rise above 15°C, although it has been observed at 10°C. It is usually observed in farmed trout produced for the table market, from 16g to pre-harvest weight. Affected fish do not feed and accumulate at pond outlets or the edge of cages. They have a swollen appearance with lighter colouration, sometimes accompanied with striping of the flanks. Internally, they have an inflamed and reddened intestine containing a yellow viscous material with no feed. Frequently, pyloric caeca are also affected but other organs look normal. An increasing number of sites have had problems due to RTGE over the last 7 years, with the largest, most intensive producers usually most severely affected. An average of 5% of fish die in affected production units but losses can be as high as 78% of the fish.

KEY FINDINGS

- RTGE behaves like a simple infection – moving fish from a unit (pond, cage, etc.) with RTGE is very likely to result in a disease outbreak in the unit which receives the fish. In addition, water movement between cages or on land based sites also appear to play a role in the spread of RTGE – i.e. the causative agent is water borne.
- High feeding levels tend to increase the severity of RTGE outbreaks.
- Salt treatment appears to provide osmotic support to affected fish rather than preventing the problem – feeding salt to fish during the outbreaks appears to reduce the overall losses but not the duration of the outbreak. Other possible actions of in-feed salt cannot be accounted for with the knowledge available.
- Liquid paraffin does not appear to have a significant effect.
- We do not have enough data to comment on other treatments such as antibiotics and Chloramin T.
- A single source of infection from eggs, fry or feed has not been identified during this project.

WHAT CAN YOU DO?

We have not field tested any control strategies and therefore can give no guarantees but have the following suggestions which you may wish to consider in the context of your own business. This applies to farms that have had RTGE, have high levels of production for the table market or consider that they might be at risk.

- Isolate units affected with RTGE and do not move the fish unless absolutely necessary.
- If possible avoid reuse of water from units suffering from RTGE.
- Addition of salt to the diet is most effective when it is commenced prior to an outbreak and maintained throughout the duration of the outbreak. The options are to have premixed diet on site and start feeding as soon as you see or suspect RTGE or you may consider using diets with added salt over the entire high risk period.
- Avoid very high levels of feeding if possible and reduce feeding at the first sign of an outbreak.