

A Fish Health Code of Practice for Salmonid Aquaculture in Ireland

This document was produced by the Irish aquaculture industry in association with IFA Aquaculture, Vet Aqua International, the Marine Institute and the Department of Agriculture, Food & the Marine.

IFA *Aquaculture*



1. Introduction

Salmonid aquaculture (salmon and trout) is an economically important industry in Ireland, located mainly along the disadvantaged western seaboard. 13,584 tonnes of salmonids were sold in 2009 with a sales value of €70 Million. Most of this was exported to meet the growing worldwide demand for high quality salmon and trout. In 2009 approximately 72% of the fish were reared organically.

A Code of Practice is essentially a commitment by the farmers to operate to the highest international standards and comply fully with all relevant regulations, maximise animal welfare, minimise environmental impact and produce safe food of the highest quality. Although the ***Fish Health Code of Practice for Salmonid Aquaculture*** is a voluntary commitment on behalf of the farmers, all operators who sign up to the code will be audited by independent certified auditors to ensure that they comply with the principles outlined below.

This Code is complementary to official regulation and existing quality schemes and is designed to ensure the consistent harmonious application of fish health policy across all marine and freshwater salmonid aquaculture businesses. The development of Codes of Practice is an integral part of EU fish health management policy. The EU legislation promotes the development of National Codes of Practice as a responsible method of self regulation:

“for diseases not subject to Community measures, but which are of local importance, the aquaculture industry should, with the assistance of the competent authorities of the Member States, take more responsibility for preventing the introduction of, or controlling such diseases through self regulation and the development of codes of practice”. Council Directive 2006/88/EC

Technical instruction and guidance on all farmed salmonid husbandry and health issues is provided for in ***The Farmed Salmonid Health Handbook***.

2. Guiding Principles

1. Operators shall comply with all relevant National and EU regulations.
2. Operators shall farm in an environmentally sustainable manner.
3. Operators shall treat their stock humanely.
4. Operators shall farm in a manner that minimises disease outbreaks.
5. Operators shall use therapeutic agents in accordance with appropriate legislation and principles of best practice.
6. Operators shall dispose of all waste in a manner that does not constitute a risk to human health or impact on the environment, in accordance with the appropriate legislation.
7. Operators shall respect the rights and safety of others.
8. Operators shall ensure the production of high quality fish which comply with all relevant food safety requirements.

3. Statutory Regulations

Operators must comply with all relevant National and EU regulations. Fish health in Ireland is controlled by the following statutory frameworks:

- (i) *Fish Health Authorisation* issued by the Marine Institute and an *Aquaculture License* (Fisheries Amendment Act 1997) issued by DAMF.
- (ii) National & EU Legislation: European Communities (Health of Aquaculture Animals and Products) Regulations 2008 (S.I. No 261 of 2008), as amended by the European Communities (Health of Aquaculture Animals and Products) (Amendment) Regulations 2010 (S.I. No. 398 of 2010).

(i) Fish Health Authorisation (FHA) & Aquaculture Licence

Each site must hold an FHA issued by the Marine Institute. To obtain an FHA, an operator must make an application to the Marine Institute and must provide details of how they are to retain records relating to increased mortality, fish movements, notifications and fish health inspections as well as providing a biosecurity plan for the site to be authorised.

The FHA issued by the Marine Institute and the Aquaculture License issued by DAFF run in parallel but if one is withdrawn in relation to a specific site, the other then has no effect. All operators must comply with the conditions outlined in their Aquaculture Licence but where there is any conflict between the requirements of the license and the requirements of the FHA, the latter takes precedence.

In relation to fish health, the main areas covered by the FHA and Licence are:

- Participation in a risk based health surveillance scheme
- Maintenance of appropriate biosecurity measures
- Record keeping and traceability
- Control of live fish movements
- Water and sediment quality
- Sea lice monitoring and control (marine)
- Fallowing
- Proactive *Fish Health management Plan*
- Prohibitions on certain discharges to waters
- Emergency plan and action

Under the fish health legislation, all increased mortality must be investigated. Increased mortality is defined as “unexplained mortalities significantly above the level of what is considered to be normal for the farm or mollusc farming area in question under the prevailing conditions”. This preliminary investigation, which is carried out by the farmer’s private veterinary practitioner, creates an early warning system, which allows an assessment of:

- (a) whether the outbreak is associated with a listed disease or

- (b) whether a new disease may be emerging or an old disease re-emerging with a different presentation or
- (c) whether the disease is an endemic one which can be dealt with directly by the farmer and his veterinary practitioner without the need to report the mortality to the MI

(ii) National & EU Legislation

Under the Fish Health Directive 2006/88/EC, Ireland is in a position to continue to legally control many diseases. For those diseases not listed in the Directive and for those diseases not subject to national control measures under Article 43, the objective is to control disease by means of this Code of Practice.

Under Directive 2006/88/EC and SI No. 261 of 2008, certain diseases are listed as *Notifiable*. If a *Notifiable Disease* is found or suspected then it must immediately be reported to the Marine Institute.

4. Fish Health & Welfare

4.1 Veterinary Health Plan

- Each farm must retain a veterinary surgeon, registered to practice in the Republic of Ireland with the Veterinary Council of Ireland (Veterinary Practice Act, 2005).
- Each finfish producer must have a *Veterinary Health Plan*, written in collaboration with a veterinarian and/or a fish health professional. This Plan will be tailored to the specific requirements of that site and form the method of implementation of this ***Fish Health Code of Practice***. More detailed elements of a *Veterinary Health Plan* are outlined in ***The Farmed Salmonid Health Handbook***.

4.2 Animal Welfare

Good management and husbandry practices are essential for the health and welfare of farmed fish. A comprehensive review of all aspects of farmed salmonid health and welfare is given in ***The Farmed Salmonid Health Handbook***. Key features of good management and husbandry include:

1. Careful site selection.
2. Monitoring of the environment to ensure optimum conditions.
3. Clear delegation of responsibilities.
4. Provision for the training and upskilling of the workforce.
5. Planned stock selection and breeding programmes.
6. Effective record keeping.
7. Good hygiene practices.
8. Regular observation of the stock.
9. Regular veterinary inspection of the stock.
10. Regular biomass assessment of the stock.
11. Minimal disturbance of the stock.
12. Forward planning of all harvesting and grading programmes.
13. Management ensuring that good husbandry practices are observed.

The European Commission has identified the promotion of animal health and welfare standards as one of the main objectives for the future sustainable development of European aquaculture. In 2005 the *Standing Committee of the European Convention for the Protection of Animals kept for Farming Purposes* adopted specific recommendations concerning farmed fish and in 2008 the World Organisation for Animal Health (OIE) adopted guiding principles for fish welfare. Furthermore, the European Food Safety Authority has produced specific documents on the welfare of farmed rainbow trout and Atlantic salmon.

4.3 Disease Management

- All stocks must be constantly monitored for health and welfare status.
- Veterinary practitioners must be kept informed of the ongoing health status of the stocks.
- On the observance of abnormal behaviour/mortality immediate steps must be taken to identify the cause and assess the risk.

- All legislative conditions regarding the official reporting of increased mortalities must be adhered to.
- When selling live fish or ova, their health status and that of the site of origin must be disclosed to the purchaser.
- Live fish or ova can only be transferred to sites of an equal or lower health status.
- Live fish must be clinically healthy at the time of movement. Exceptions may be made where licensing issues arise, but these must be notified in advance to the Marine Institute.

4.4 Biosecurity

Appropriate and effective biosecurity measures must be in place to minimize the introduction of new infections into the farm.

Biosecurity is the mechanism through which the risks of introducing and transferring disease on and off site can be controlled. External barriers are those that are designed to prevent entry on and off the farm and internal barriers are those which prevent the spread of disease within a farm. Disease pathogens can be introduced to a site by inadvertently introducing infected stock or by cross contamination from one site to another by contaminated equipment such as hand nets or boats. In addition, fish stocks on site can be subject to pathogens from the surrounding environment. Control measures must be in place to ensure ongoing fish health and welfare, to prevent the entry of pathogens, to minimize disease spread within the site and to have an appropriate disinfection plan.

4.5 Enforced Culling

In the event of the diagnosis of a *Notifiable Disease*, or in other cases where it is deemed necessary, the Marine Institute may order the culling of all stock in an affected area. A risk management approach will be applied on a case by case basis in consultation with relevant experts and the Marine Institute will seek to achieve consensus on the fish health measures that may be necessary to control and eventually eradicate the disease. If the decision is made that, in the national interest affected stock must be culled, a case will be made by industry, for adequate compensation for the affected companies to the Department of Agriculture, Marine and Food (DAMF) and/or the EU.

4.6 Sea Lice Management

It is a legal requirement that all marine finfish farms control levels of sea lice on their stock:

- Sea lice levels must be monitored regularly on all marine sites to protect the health and welfare status of the stock.
- Each marine farm *Veterinary Health Plan* must contain a *Sea Lice Management Strategy*.
- On the identification of an infestation all steps must be taken to minimise the outbreak and reduce its effects on the health and welfare of the stock.
- Each marine farm must comply with all terms of their licence in relation to sea lice management including the official inspections, trigger levels, treatments as set out in *A Strategy for Improved Pest Control on Irish Salmon Farms* (DAFF, 2008).

4.7 Fallowing

It is a condition of all marine licences that each site must be fallowed for a minimum of four weeks between generations. Fallowing is a recognised management strategy known to assist in the control of disease and parasite problems.

Fallowing is usually carried out prior to the introduction of a new population of aquatic animals into a previously used site. Experience has shown that with certain fish pathogens this approach can be ineffective and total bay or synchronous fallowing may need to be considered.

Currently in Ireland, the minimum statutory fallowing period for marine sites is one month. Where necessary this time frame should be extended to take account of the infective period of any pathogens of concern. Where this is unknown, the longest fallowing period possible should be used. A mandatory fallowing period of up to six months may be required before re-stocking following an outbreak of a *Notifiable Disease*.

The fallowing period begins after all susceptible species have been removed. This is followed by thorough cleaning and disinfection of the pen/tank infrastructure and ancillary equipment, using approved methods.

4.8 Waste Management

- Each farm must have a *Waste Management Plan* in order to effectively manage, use and dispose of waste. The plan shall include an agreement with a licensed operator to deal with all routine farm and fish waste.
- All fish waste should be disposed of in accordance with current Animal By-Products Regulations.

4.9 Emergency Plans

All farms must have emergency plans drawn up to cover events such as mass mortality, fish escapes, detection of a *Notifiable Disease*, oil spill or other environmental disasters.

4.10 Training

All farm staff should receive introductory training in fish health and welfare. All staff should stay informed of emerging fish health and welfare issues and should be encouraged to attend fish health meetings and workshops. Records of all training should be kept.

- All relevant staff must be trained in the implementation of the ***Fish Health Code of Practice for Salmonid Aquaculture*** and ***The Farmed Salmonid Health Handbook***.
- It is the responsibility of senior management to ensure that staff training is updated in line with any modifications to ***The Farmed Salmonid Health Handbook***.