



Sea Lice Management Strategy 2004

Based on findings from the 2003 Broughton Archipelago Sea Lice Action Plan, the province has developed the following approach for management of sea lice in salmon farms in British Columbia.

- Beyond the Broughton – extension of the sea lice audit and surveillance program.
- Mandatory sea lice monitoring – fish health management plans.
- Sea lice research and development – sea lice research programs under the auspices of the B.C. Aquaculture Research and Development Committee.
- Co-ordination and communication of sea lice information from wild and farmed salmon monitoring.
- Education and training in sea lice identification.

Beyond the Broughton: Monitoring in 2004

The Ministry of Agriculture, Food and Fisheries has extended requirements for sea lice monitoring to include the entire salmon farming industry. The on-farm sampling program is based on internationally accepted standards for sea lice monitoring. The industry will be required to report monitoring of lice on all farms within specific fish health zones/areas.

This information will be evaluated along with environmental information to support integrated area management of farmed fish lice populations during wild stock migration.

A working group of fish health experts and veterinarians responsible for management of aquaculture stocks has been established to evaluate the information collected and the effectiveness of the control measures taken. The group will work with Fisheries and Oceans Canada to integrate wild fish information.

Results will be reported on a quarterly basis to MAFF and will be posted on the MAFF website. MAFF will also be conducting an auditing program with on-farm sampling of sea lice. This audit will ensure validation of the data submitted from industry and will be reported on the MAFF website. The ministry has hired two fish health technicians for these activities.

Mandatory Sea Lice Monitoring

As of November 2003, all salmon farm sites must have a Fish Health Management Plan. These plans are a condition of licence and as such are enforceable. All companies must provide MAFF with a plan for approval. The sea lice monitoring program is required as part of the Fish Health Management Plan.

Sea Lice Research and Development

In 2003, the province funded an international science forum that resulted in preparation of a white paper to identify research priorities and management approaches to sea lice. The Science Council's BC Aquaculture Research and Development Committee supported four research projects on sea lice.



Co-ordination and Communication on Sea Lice Research

The province, federal Department of Fisheries and Oceans and industry established a technical advisory team of scientists to evaluate the information gathered from wild and farmed fish monitoring in the Broughton in 2003. A preliminary overview of these studies will be presented in a public forum in January 2004.

The technical advisory team will also continue to evaluate and report out on information gathered during 2004.

Education and Training in Sea Lice Identification

The province, the Centre for Aquatic Health Sciences and North Island College are hosting a workshop on sampling and identification of sea lice for industry and First Nations to improve skills and support monitoring efforts.



Review of the 2003 Interim Sea Lice Monitoring Program Broughton Archipelago

In 2002, concern was expressed that a low return of pink salmon was the result of infestation by sea lice (*Lepeophtheirus salmonis*) during the Spring 2001 out-migration of their year-class from the Broughton Archipelago.

In 2003, the province developed the Broughton Archipelago Sea Lice Action plan. The plan recognized that multiple factors such as warm weather, earlier record high populations and low water in salmon streams could have contributed to a reduced pink salmon return in 2002 and that sea lice levels on farms had to be assessed in the context of these other factors.

The plan included on-farm monitoring to evaluate sea lice levels on salmon farms and the possible implications for wild pink salmon stocks. Studies were undertaken to look at the infestation rates and intervention techniques for lice control at individual farm sites.

At the same time, Fisheries and Oceans Canada undertook a survey of lice levels on wild salmonids and other finfish species and number of juveniles emerging from area rivers.

The provincial plan was in place in time for the 2003 spring out-migration of juvenile pink salmon and included:

- enhanced monitoring of farmed salmon,
- surveillance of farm sea lice levels by provincial staff,
- co-ordination of treatment plans with farm veterinarians based on number of sea lice collected in samples from farms every two weeks,
- opportunities for stakeholder and First Nations observation of Ministry surveillance activities, and
- in agreement with industry, leaving a number of farms fallow along a suggested migration route as a contribution to research efforts.

The monitoring program documented average lice levels on farms and coordinated with veterinary professionals who were monitoring and managing farm fish health.

Assessment of the data from salmon farms in 2003 showed that during the Spring migration of wild stock, lice levels on farmed salmon were low compared to levels documented in Europe where intervention for lice control was required. Industry strategically harvested certain size categories of fish and treated farmed fish stocks to maintain low lice levels and reduce any potential for impact to juvenile salmon in this area.



Further information:

Ministry of Agriculture, Food and Fisheries
www.gov.bc.ca/agf

Fish Health
www.agf.gov.bc.ca/fisheries/health/index.htm

DFO Sea Lice
www-sci.pac.dfo-mpo.gc.ca/mehsd