

REPORT OF THE
Working Group on Marine Fish Culture

By correspondence
May 2003

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1 INTRODUCTION

The Working Group of Marine Fish Culture should have met in March 2003 in Vigo, Spain to address the terms of reference (TORs) approved by the Council in 2002:

- a) Compile and report on the existing regulations of individual ICES Member Countries and the EU with regard to ingredients in fish feeds;
- b) *Review and report on the use of ICES standard reference diets and emulsions in research programmes and recommend any modifications to existing formulations and procedures;*
- c) *Review genetic considerations in selective breeding and identify genetic applications and rearing technologies suited for selective breeding of marine fish;*
- d) Compile information on the current state of the art of microdiets as a replacement for live food for larval fish with the intention to produce a review article in a peer-reviewed publication in 2–3 years;
- e) *Prepare a proposal to recommend microdiets for comparative testing and particular protocols to use during the testing;*
- f) Review and report on the use of live feed organisms other than rotifers and Artemia (alternative live feeds) that are used or considered for use in the culture of marine fish larvae;
- g) Prepare a summary of the instances where aquaculture is being used to produce fish for restocking or enhancement of wild populations in ICES Member Countries;
- h) *Prepare a list of technological advances that would be necessary for land-based aquaculture, especially recirculation systems, to greatly expand in the next 10–15 years, on the basis of that list, and develop a set of tasks for WGMAFC;*
- i) Prepare a report on the status of research and technology of single-sex fish production and its application to the cultivation of marine fish, based on input from experts in the field;
- j) *Compile a report on the existing methods to ensure that measures can be taken to protect broodstock and larval animals from exposure to microbial pathogens;*
- k) Prepare a report on existing knowledge of the effects of water quality (e.g., ozone and resulting compounds, ammonia, microbiology, and probiotics) on intensive land-based marine fish culture.

The 2003 meeting in Spain was cancelled due to low registration. The ToRs have not been assigned to members for the preparation of draft reports, and will therefore be updated according to the new guidelines and be dealt with at the 2004 meeting that will take place in Vigo, Spain in mid-April. It was also evident that the number and extent of the ToRs were ambiguous, and needed to be reduced. The ToRs marked with *italics* are suggested to be removed, or postponed to later meetings. In the following list, each ToR has a suggested Project Leader that will have the responsibility to gather information from the other WG members to work out a draft report for the WG meeting. These draft reports should be finished and mailed to the Chair by the end of March 2004 to be edited into the report for ICES.

The suggestion for new ToRs for the 2004 meeting is as follows:

The **Working Group on Marine Fish Culture** [WGMAFC] (Chair: A. Mangor-Jensen, Norway) will meet in Vigo, Spain in mid-April 2004 to:

- a) Compile and report on the existing regulations of individual ICES Member Countries and the EU with regard to ingredients in fish feeds (Suggested Project Leader: Dave Bengtson, USA);
- b) Compile information on the current state of the art of microdiets as a replacement for live food for larval fish. (Suggested Project Leader: R. Fitzgerald, Ireland);

- c) Review and report on the use of live feed organisms other than rotifers and Artemia (alternative live feeds) that are used or considered for use in the culture of marine fish larvae (Suggested Project Leader: J. Støttrup, Denmark);
- d) Prepare a summary of the instances where aquaculture is being used to produce fish for restocking or enhancement of wild populations in ICES Member Countries (Suggested Project Leader: J.B. Peleteiro, Spain);
- e) Prepare a report on the status of research and technology of single-sex fish production and its application to the cultivation of marine fish, based on input from experts in the field (Suggested Project Leader: H. Ackerfors, Sweden);
- f) Prepare a report on existing knowledge of the effects of water quality (e.g., ozone and resulting compounds, ammonia, microbiology, and probiotics) on intensive land-based marine fish culture, included recirculation (Suggested Project Leader: U. Waller, Germany);
- g) Prepare a report on long- and short-term effects of gas-supersaturation in intensive marine fish cultures (Suggested Project Leader: A. Mangor-Jensen, Norway).

The previous ToRs b, c, e, h, and j have been taken out of the original list. A new ToR addressing the problem of gas supersaturation in intensive culture systems has been added.