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EUROPEAN INLAND FISHERIES ADVISORY COMMISSION

TWENTY-THIRD SESSION

Wierzba, Poland, 26 May – 2 June 2004

PROGRESS REPORT SUB-COMMISSION II – Aquaculture

Chairperson: L. Váradi (Hungary)

Vice-Chairperson: N.N.

Rapporteur: J.-P. Proteau (France)

Technical Secretary: U. Barg (FAO)

Activities and achievements of the Sub-commission during the intersessional period are summarized as follows:

***Ad hoc* Working Party on Fish Diseases and Their Control**

Convener: N.N.

During the last Executive Committee meeting it was agreed that the Working Party should continue its activities with the overall focus on providing best practice guidance materials which should be based on best available science. The WP could also study fish disease transmission effects to wild populations resulting from culture-based fisheries or other practices. Furthermore, future activities could also cover technical and scientific aspects and issues associated with present changes in fish health legislation in European countries. It was concluded that the Terms of Reference of the Working Party should be revised.

By the time of preparation of this report no feedback has been received from the Working Party, except from the Technical Secretary, Mr. R. Subashinge, who confirmed that the proceedings of the 1999 EIFAC/EAFP Workshop on Carp and Sturgeon Health Management are still being finalized. Mr. Subashinge is hoping that these proceedings will be printed before the end of 2004. It is believed that now, as new EIFAC member states are joining the EU, there is a considerable opportunity for this Working Party to assist EIFAC members with work on fish health in Europe. Therefore, EIFAC delegates of the 23rd Session are invited to express their views and interest in the work of this Working Party and, in the affirmative case, a new Convener should be identified.

Ad hoc Working Party on Aquatic Resources Management in Aquaculture

Convener: N.N.

The Chairperson of the Sub-Commission met some potential experts for the WP during the European Aquaculture Society (EAS) Conference in Trondheim in August 2003. Mr Marc Verdegem (Wageningen Agricultural University; The Netherlands) accepted the invitation to act as Convener of the WP. Mr Verdegem has been highly involved in research on the development of water efficient aquaculture systems and has wide international experience. The work plan and a study outline on Aquatic Resources Utilization by Aquaculture, which were elaborated by the previous Convener, have been provided to Mr Verdegem, inviting him to review the papers and prepare a revised work plan for the WP. Mr Verdegem will attend the EIFAC Symposium in Wierzba, where the WP will organize an ad-hoc meeting with the involvement of interested experts who attend the Symposium. Mr Knösche (Institute for Inland Fisheries, Potsdam, Germany) also expressed interest in the work of the WP.

Ad hoc Working Party on Organic Fish Farming

Convener: V. Hilge

The two main intersessional activities included (i) a questionnaire-based survey on the present status of organic fish farming (OFF) and organic fish feed manufacturing in EIFAC countries, and (ii) research conducted in Germany on specific aspects of organic trout farming as compared to conventional farming methods.

There were eight replies to the general survey questionnaire sent out to all EIFAC member countries. Generally, organic fish farming is slowly developing in Europe, mainly in freshwater. Important species are carp, rainbow trout and brown trout. Some attempts are being made with char and brook trout, also with eel, perch and some byfishes of carp pond culture like pike, pike-perch, tench and European catfish, as well as with organic mariculture of salmon, seabass and gilthead sea bream. Traditional earthen ponds are used mainly, while some experiments include recirculation systems and marine cages. Unfortunately, questionnaire responses regarding numbers of farms, tonnage produced, cultured area etc. are rather incomplete. Products are often sold fresh or smoked. Prices reached apparently range 20 – 50 % above usual market prices, although premium prices depend on demand.

Problems with the implementation of OFF standards relate to prohibited use of chemicals like formaldehyde or copper sulfate, and the availability and costs of fish feed. Higher production costs result in higher prices causing more unpredictable consumer behaviour. With a rather low total production steady supplies often cannot be maintained resulting in local sales as the only alternative. Producers often lack market information.

Governmental policies or financial or technical support for organic aquaculture usually do not exist (as compared to support given for conversion to organic agriculture), but there may be some R&D to support development of OFF. Conversion to and certification of organic fish farming and the labelling of the produce may be according to governmental legislation, where existing, or following guidelines of private organisations, members of IFOAM (International Federation of Organic Agriculture Movements). The European Commission intends to expand Regulation 2092/91/EU on organic agriculture to include organic aquaculture.

A second feed-specific questionnaire on the manufacture of organic fish feeds for salmonids and other species mentioned above yielded six responses. Apparently only a few feed mills in Europe produce feeds for trout. These are located in France (700 t/a), Germany (100 t/a ?) and Switzerland. Production in Denmark stopped in 2002. No information was obtained from UK and Ireland, while information received from Poland needs to be verified.

A comparative study was conducted in Germany on the product quality and potential environmental impact of rainbow trout production in conventional and ecologically certified farms. Two certified organic farms with low and medium stocking densities were compared with three conventional farms with low, medium and high densities. Water quality changes at pond inlets and outlets (ammonia, nitrite, total and ortho-phosphate, COD, particulate matter, temperature, oxygen and conductivity) were monitored. In no case were values recorded which would be worth mentioning. Two laboratory feeding experiments comparing conventional and organic trout feeds with regard to growth, feed conversion and protein utilization (protein efficiency ratio) showed a clear superiority of conventional feeds. Daily nitrogen (ammonia) excretion was recorded in relation to ration size, water temperature and body weight. Lower ammonia excretion could be observed for the conventional feeds, which combined with the results of the growth trials reveal a lower potential environmental impact of the conventional as compared to the organic way of rainbow trout production.

Product quality determinations of portion trout included body length, weight, health status, dress-off weight, microbiological tests, colour and texture measurements, surface structure and aromatic profile using an electronic nose, proximate analyses, vitamins, carotenoids, iodine and pollutant burden (PCBs, dioxins) and parasites. The overall quality of trout was good irrespective of their method of production. This included appearance and skin pigmentation. The microbiological status after keeping the fish for two days on ice was excellent, all tissues were sterile and no clostridia could be detected. There was no relation between the method of production (conventional vs. ecological) and body composition. The nutritional value of all trout was equally good. Pollutant residues were far below maximum allowable limits and there were no differences in the body burdens between fish of both methods of culture. The sensory assessment (taste, texture and odour) revealed no differences nor did the aroma or texture profile analyses.

The Convenor will present the efforts and findings by this Working Party at the forthcoming Organic Aquaculture and Sea Farming Conference which will be held in Ho Chi Minh City, Vietnam, 15-17 June, 2004. The Chairperson of the Sub-Commission will also present a paper on organic carp farming during that Conference.

***Ad hoc* Working Party on Market Perspectives of European Freshwater Aquaculture**

Convenor: L. Varadi

It was agreed during the last Executive Committee meeting, that the scope of work of this WP also be reviewed, and that a road map with major events and target dates be developed for this WP. Marketing of freshwater products continues to be a critical issue in European aquaculture, especially in view of the enlargement of the EU. The total freshwater aquaculture production within the EU will increase by about 30% after the accession of the 10 new member states.

In January 2004 there was a discussion between Mr Vamvakas (EC-DG Fish; Aquaculture Unit), Mr Lem (FAO Fish Utilization and Marketing Service) and the Chairperson of the Sub-Commission. It was decided that efforts will be made to organize a Workshop on Freshwater Aquaculture Marketing in 2005 jointly by FAO/EIFAC and the European Commission. The topic will be on marketing aspects in European freshwater aquaculture with a special focus on the accession countries. The possibility of organising it in Hungary will be investigated. HAKI at Szarvas offered its assistance to host the Workshop. FAO will provide a European market study for freshwater species, which will be discussed at the Workshop, and FAO may also publish the final report. The European Commission will investigate the possibility to cover the cost of the workshop for about 40 participants. Input for the workshop will be sought from relevant organizations and institutions such as EIFAC, FEAP, national organizations and institutes.

The Proceedings of the 2nd Conference on Aquaculture Economics and Marketing, held in Szarvas, Hungary, 30 September - 2 October 2002, have been published as a periodical of the

Research Institute for Fisheries, Aquaculture and Irrigation (HAKI). Copies will be provided to the EIFAC Secretariat and the FAO Fish Utilization and Marketing Service.

Other Activities

EIFAC Sub-Commission II has been actively involved in the establishment of a Network of Aquaculture Centres in Central and Eastern Europe (NACEE). The main objective of NACEE is to assist the integration of institutions in Central and Eastern European countries into the European Research Area. The operation of the Network will also contribute to the better involvement of Central and Eastern European scientists and professionals in EIFAC activities. Currently the Network has 17 member institutions from 12 countries (Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Lithuania, Moldova, Poland, Republic of Belarus, Romania, Russia, Ukraine). FAO envisages possibilities of supporting the efforts of the Network in organizing a NACEE Workshop during October this year. A small meeting will be held for those NACEE members, who will attend the EIFAC Symposium in Wierzba.