
This paper not to be cited without prior reference to the Council*

International Council for the
Exploration of the Sea

Mariculture Committee
C.M. 1990/F:1

Activity Report 1989/90 Mariculture Committee

by

Harald Rosenthal

Institut für Meereskunde
Abteilung Fischereibiologie
Universität Kiel
Germany



THÜNEN

Digitalization sponsored
by Thünen-Institut

BELGIUM

by

(Patrick Sorgeloos, Ghent)

State University of Ghent,
Laboratory of Aquaculture & Artemia Reference Center

R & D achievements:

- successful substitution up to 80% of the microalgal diet by amanipulated yeast product in the early nursery culture of the clam *Tapes semidecussata*.
- improved larvaculture outputs of *Macrobrachium rosenbergii* by the use of HUFA-enriched Artemia.

- improved larviculture outputs of the Asian sea bass *Lates calcarifer* and the mahi-mahi *Coryphaena hippurus* by the use of HUFA-enriched *Artemia*.
- successful use of a new microparticulate diet as a zoea/mysis diet for *Penaeus* spp.
- successful use of decapsulated *Artemia* cysts as a post-larval diet for *Penaeus* spp.
- development of dry enrichment diets for *Brachionus* and *Artemia*.
- development of super-HUFA rich enrichment diets for *Brachionus* and *Artemia*.
- successful substitution of *Artemia* nauplii by ongrown *Artemia* in the PL-culture of *Penaeus monodon*.
- processing and use of *Artemia* biomass as a dietary ingredient for postlarval shrimp.

Organization of the "6th International *Artemia* Training Course" with 35 participants from Italy, Spain, Greece, Cyprus, Morocco, Algeria, Tunisia, Egypt, Thailand, Indonesia, PR China, Malaysia, Vietnam, Philippines, USSR, Ecuador, Brazil, Chili, Cuba, Haiti, Panama and Costa Rica.

Organization of workshops and training sessions on fish/crustacean larviculture and *Artemia* culture in Australia, Philippines, and the Dominican Republic.

Consultancy missions for the international agencies UNDP, UNIDO, UN-Mekong, FAO, and the EEC regarding *Artemia* production and use.

***Artemia* systems NV/SA**

Development (contract research with the Laboratory of Aquaculture of the State University of Ghent) and marketing of new diets for use in larviculture of marine fish and shrimp.

**Catholic University of Leuven,
Laboratory of Ecology and Aquaculture**

- Marine ecological research on the impact of bacterial and parasitological infections of fish populations.
- Monitoring and prevention of biofouling in industrial cooling systems, especially the species *Balanus improvisus* and *Cordylophora caspia*.
- Study of the immune response in fish larvae
- Biochemical characterisation of fish *Aeromonas* strains
- Sea bass *Dicentrarchus labrax*:
 - zootechnical aspects of growout in nuclear power effluents,
 - synthesis and secretion of thyroid hormones,
 - sex-differentiation and sex-ratio in farmed populations,
- Eel *Anguilla anguilla*:
 - zootechnical aspects of growout in nuclear power effluents,
 - development of recirculation system for intensive culture,
 - study of parameters responsible for the reduction innatural ,
- eel-stocks in Belgium
 - genetic study of sex-differentiation.

Nuclear power station, Doel--Antwerpen

Production of 900 kg sea bass *Dicentrarchus labrax* and 200 kg eels *Anguilla anguilla*. Intentions exists for up-scaling to culture of sea-bass on a commercial basis.

CANADA

by

(R.H. Cook)
St. Andrews, New Brunswick

This report summarizes mariculture research activities in Canada, concentrating on research by government institutions. For the most part, university and private sector research has not been included, except in joint projects with government agencies.