



M. HASAN, FAO

Participants of the FAO Feed Expert Workshop, Wuxi, PR China, 18 March 2006 with Mr Li Jieren (5th from right), Vice President of Chinese Academy Fisheries Science and Prof. Xu Pao (6th from right), Director, Freshwater Fisheries Research Center (FFRC), Chinese Academy of Fishery Sciences

FAO Expert Workshop on Use of Feed and Fertilizer for Sustainable Aquaculture Development

Wuxi, Jiangsu Province, PR China, 18-21 March 2006

Mohammad R. Hasan¹

The Inland Fisheries and Aquaculture Service (FIRI) of FAO organized an expert workshop on "Use of Feed and Fertilizer for Sustainable Aquaculture Development" in collaboration with Freshwater Fisheries Research Centre (FFRC) and Network of Aquaculture Centres in Asia-Pacific (NACA). The workshop, participated by recognized international experts in the field of aquaculture, aquaculture nutrition and aquafeed including the authors of country reviews, case studies, regional synthesis, global synthesis including participation from FAO, FFRC and NACA, was convened between the 18-21 March 2006, and hosted by the Freshwater Fisheries Centre (FFRC), Chinese Academy of Science at the FFRC Campus in Wuxi, Jiangsu Province, China PR. The workshop was undertaken as part of FIRI's work programme on "Study and analysis of feed and nutrients (including fertilizers) for sustainable aquaculture development" under Programme Entity entitled "Promotion of Responsible Inland Fisheries and Aquaculture".

The objectives of the workshop were to review and analyze the status and trends in aquaculture production (with particular reference to fish and crustacean species that

feed on aquafeeds) and to identify key issues and challenges of feed and fertilizer resources for sustainable aquaculture development. The workshop combined technical presentations and working group discussions. A number of country reviews from Asia (e.g., Bangladesh, China, India, Indonesia, Thailand, the Philippines, Viet Nam) and Africa (e.g., Cameroon, Egypt, Ghana, Kenya, Malawi, Nigeria and Uganda), case studies on economics of aquaculture feeding systems in selected countries of Asia, regional reviews (Asia, Africa and Latin American regions) and one global review was commissioned prior to the workshop and selected reviews, case studies, syntheses were presented during the workshop.

The working group discussion specifically addressed two major themes related to the use of feed and fertilizers for sustainable aquaculture development, namely: (a) development of the aquafeed industries, impact of availability of protein sources and alternatives and their feasibility for use; and (b) home/farm-made aquafeeds (including manures & fertilizers) - opportunities and constraints concerning their availability, feasibility and management. Based on the reviews and analysis during technical

and working group sessions, the workshop identified key issues and suggested appropriate actions (i.e., policy & regulation, studies & research, extension, application & adoption, capacity building, and public & private sector partnership) to address these issues.

During the plenary, issues identified by the working groups and the actions needed to these issues were discussed and it was recommended that FAO may take up the following actions to assist national governments and regional organizations:

- Review existing national standards and legislation regarding the dietary nutrient specifications (where they exist) for the manufacture of compound aquafeeds/ farm-made aquafeeds for the major cultivated fish species, including the provision of guidelines and advisory material for different farming systems and feed types;
- Review existing national mechanisms of incentives, subsidies and taxes affecting the animal feed manufacturing sector and feed ingredient usage, including feed ingredient imports and export/domestic promotion strategies;
- Compile available information (in the form of synopses) on the dietary nutritional requirements of major cultured fish species and the feed ingredients currently used within compound/farm-made aquafeeds, including national/regional feed ingredient source books containing information on nutrient composition,

quality control criteria, seasonality, and market price;

- Encourage the strengthening of national/ regional dialogue, exchange of information and research priority setting between researchers/public sector and the aquaculture sector (including farmers and feed manufacturers), through support to the activities of national/regional organizations, the implementation of joint research projects, the establishment of national farmer/aquafeed associations, and the development of web-based information and research networks; and
- Strengthen capacity building in aquaculture nutrition and feed technology, including on-farm feed management, for farmers, feed manufacturers, private service providers, researchers and extension workers within developing countries (and in particular within sub-Saharan Africa). This may also respond well to inter-regional cooperation.

The full report of the workshop will be published as an FAO Fisheries Proceedings and will include selected country reviews, case studies, three regional reviews, global synthesis, invited presentations and working group recommendations. Further details of the workshop report and the proceedings are available from Mohammad R. Hasan at FIRI (e-mail: Mohammad.Hasan@fao.org).

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