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Research and application of aquatic animal eco-nutrition based on industrialized culture

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We were the first to define and study the aquatic animal eco-nutrition and feed with nutrition emission reduction in order to reduce the negative effects of water environment and health, those caused by nutrition, feed and feeding. The researches systematically regulated internal and external environment of aquatic animals, guided by new theory and method of eco-nutrition and also adopted modern nutrition, biotechnology, processing technology, feeding strategy, etc. We obtained six important achievements after 10 years of experimental study: "Rhomb Characteristics" was firstly named and defined that the relationship between WGR and NH_4^+-N was typical of protein eco-nutrition and the change curve looked like a rhomb; achieved eco-nutrition requirements of main nutrients for some marine fish in recirculation aquaculture system (RAS), providing important parameters for developing ecological and valuable compound feed; preliminary ascertained the effects of diet protein, satiety degree on growth, nitrogen excretion, digestion and immunity of *Cynoglossus semilaevis* G.; produced initial success on association study between eco-nutrition and molecule nutrition; the development on compound feed with N and P emission reduction for flatfish made a breakthrough and the new products applied rapidly; scored important result on study of feeding strategy and intake model. In conclusion, the results provided theoretical basis and applicable technology for the goal of sustainable aquaculture that is the balance and harmonious development among suitable nutrients, stability environment, healthy growth, excellent products and cheap cost.

Biography

Yong Li has completed his PhD from China Agricultural University in 2001. He is a Professor of Institute of Oceanology, Chinese Academy of Sciences. His research interest is ecological nutrition and clean feed on aquatic animal. At present, he is working as a Principal of Projects on aquatic animal nutrition and feed research, and focused his attention to theory study and technical development on ecological nutrition and environmental stabilization for aquaculture. He is the Standing Director of Qingdao Society of Fisheries and Qingdao Innovation Union of Feed. He also is the Director of Academic Committee, Jiangsu Province Innovation Union of Mariculture.

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