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Sustainable Aquaculture for a Secure Future

Title: Immunostimulants for Aquaculture Health Management

Author(s): D. Barman[1], P. Nen[2], S.C Mandal[3] and V. Kumar[4]

1. Center for Aquaculture Research and Development (CARD), St. Xavier's Vocational Training Center, Don Bosco, Bishramganj, Tripura, India
2. Fishery Officer, Freshwater Aquaculture research and Development Center, Cambodia
3. College of Fisheries, Central Agricultural University, Lembucherra, Tripura, India
4. Central Institute of Fisheries Education, Mumbai, India

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Abstract: Aquaculture is gaining momentum in several parts of the world in recent years. Intensification has become a common practice in both finfish and shellfish culture to optimize the returns. High stocking densities, artificial feeding and fertilization have become common husbandry practices in both carp and shrimp culture systems. Due to intensification of culture practices, diseases of microbial etiology of economical significance has surfaced in rearing and grow out ponds and are major threat to the sustainability of the aquaculture industry. Synthetic chemicals and antibiotics have been used to prevent or treat fish and shrimp and have achieved at least partial success. Vaccination against specific pathogens has been developed recently with some success depending on the particular disease. An alternative approach has been the application of various compounds to boost or stimulate the innate immune system of farmed fish and shrimp. These compounds, termed immunostimulants is considered an attractive and promising agent for the prevention of diseases in fish and shellfish. In recent years, the established beneficial effects of immunostimulants in many livings systems promote their application for disease management in aquaculture practices.

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