

'BIOREMEDIATION' TO RESTORE THE HEALTH OF AQUACULTURE POND ECOSYSTEM

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Aquaculture is concerned with 'the propagation and rearing of aquatic organisms under complete human control involving manipulation of atleast one stage of an aquatic organism's life before harvest, in-order-to increase its production'. Fish catches from the marine environment have been steadily declining in many parts of the world due to overexploitation and pollution; many people are turning to aquaculture to improve the food production and to contribute for economic development. Aquaculture, in India, has made encouraging progress in the past two decades producing significant quantities of food, income and employment. Aquaculture, particularly, tiger shrimp *Penaeus monodon* culture, has extensively been practiced all along coastal regions of India. Increased production is being achieved by expansion of culture areas and the use of modern methods. This development of aquaculture in our country has led to not only severe disease problems but also alteration of the quality of our natural habitats through increased effluent discharges from aquaculture systems, which contains high quantities of hither-to-non-existent materials of both organic and inorganic forms. Since recent past it has been observed that the sustainable development of aquaculture sector can be achieved by adopting eco-friendly aquaculture practices by minimizing impact on the surrounding environment. To maintain healthy ecosystem in aquaculture ponds and hatchery tanks, bioremediation is the best biotechnology process. Many researchers have been demonstrated that the pathogens can be eliminated or minimized through this bio-control process and hence can achieve good yield by maximizing both survival rate and growth rate and by minimizing the disease problems in aquaculture systems.

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