

MARICULTURE-A FUTURISTIC OPPORTUNITY FOR MINIMIZING LAND USE

"Mariculture could be the future of fish production in India"

Alfias

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Mariculture is often defined as aquaculture in the marine environment. Some groups limit the mariculture to a culture of marine plants and animals in the ocean itself, on the other hand, it is a specialized wing of aquaculture that is undertaken in marine environments. The major categories of mariculture species are seaweeds, mollusks, crustaceans, and finfish. One of the main advantages of mariculture is easier to predict the output or harvest. Also, harvesting is easier and the quality is consistent, resulting in lower costs and higher profits.

Mariculture could be the future of fish production in India. Responding to the challenge, the Central Marine Fisheries Research Institute (CMFRI) has proposed a comprehensive mariculture policy to boost the output of marine food products, increases export and generate local employment for communities that have traditionally relied on the sea. Mariculture is one of the best alternative employment options for India's 40-lakh-odd fisher folk to meet the ever - increasing demand for fish.

Fish production in India is almost entirely from the capture of fisheries, despite the country having huge potential for sea farming. With nearly 3.5 percent growth per annum, India should be producing at least 10.5 million tonnes of marine fish by 2050.

Unlike other South Asian countries, sea farming or mariculture in India has long been confined to the culture of seaweeds, pearly oysters, edible oysters, and mussels in a few patches of the South West coast.

Given the present stagnation in capture fisheries production (3.63 million tonnes in 2016; 3.40 million tonnes in 2015; 3.53 million in 2014), the area could be profitably used for mariculture by adopting sustainable and socially acceptable methodologies. The main groups

of marine resources farmed in India are crustaceans, finfishes, mollusks, and seaweeds. Mariculture can partially fulfill the deficit in fish production.

To meet the demand, India needs 15 million tonnes of fish from marine, brackish and freshwater resources. Expected production of 10 million tonnes in the year 2020. Therefore, CMFRI has taken steps to promote open-sea cage farming across the maritime States.

When land availability becomes scarce, sea cage farming will prove to be an opportunity to fish farmers. Diversification of culture practices and inclusion of new candidate species for mariculture will definitely augment fish production.

CULTIVATION OF VANAMI SHRIMP IN HOME TERRACE



It is estimated that the shrimp culture in our country gives more profit in export marketing. A disease known as **white feces** affected aquaculture in 1990 after that the government declined as no cultivation of shrimp in 1995 to avoid the spread of virus causing this disease. ICAR, SEBA, MPEDA introduced vanami shrimp from America. It is one of the best commercially viable cultures. It can be cultivated on the terrace itself to minimize land use.

Steps for creating terrace vanami cultivation:

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- « Concreted terrace can be covered by using qualified 200 grams per square metre (gsm) tarpaulin.
- « Prescribed proportion 1:3 ratio of normal sanitized water(through chlorination) and sea water with more than 20 parts per trillion. Seawater is rich in micronutrients like Magnesium, Calcium, Phosphorus which is helpful for the development of shells.
- « First to prepare nursery tank for growth of shrimp seeds at particular parts per trillion and gradually change parts per trillion as same as to main culturing tank.
- « With the use of aerator, aerox tubes with separate valves for adjusting pressure is also needed for the culturing tank, pH value should be maintained up to 6.5 to 7.
- « Use some probiotics up to 3 days before introducing small shrimps into culturing tank.



- « First month provide blind feeding and after that use tray feeding by proper calculation of body weight of shrimp.
- « Use feed supplements like Agrimin, as per suggestions in the package, then probiotics CUSAT PS-1 , Optibac etc, these feed probiotics help to maintain stomach functions, moulding and also gives immunity to shrimp.
- « Use detergents like potassium permanganate by the person who directly in contact with tank and also systematic waste management is needed for better yield.

By these methods, vanami shrimp can be cultivated more without using more land area. 90-120 days is the harvesting period of vanami shrimp ,this business is a direct selling method because without any marketing agency, advertisements, wholesale marketing areas, marketing shops, etc the final product goes to the direct customer itself. We can earn more profit from a small area of our home terrace. By using this terrace culture the land use can be reduced and it can be a part of our home like a home with a garden.

