

Harvesting Methods in Shrimp Farming

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DESCRIPTION

Shrimp farming is a type of aquaculture industry that involves the commercial growth of prawns and marine shrimp for human consumption. This is an idea that goes back to the 1970's in order to meet the demands of Japan, the United States, and many other Western European countries. By 2003, the shrimp farm sector had grown quickly, producing over 1.6 million tons worth more than USD 9 billion. Asia has the great majority of the world's shrimp farms. 75 percent of farmed shrimp comes from Asiatic nations like Thailand and China, according to estimates. The remaining farms are spread out over other Latin American nations. Brazil, in particular, is known as the region's largest shrimp producer. Because of the quantities generated by countries like India, Vietnam, Ecuador, and Bangladesh, the farmed shrimp account for roughly 55% of global shrimp output.

Shrimp farm techniques

The following factors impact the farmer's choice of shrimp cultivation techniques: Climate, Land, water, power, and cost are all factors to consider. Costs of transportation, Credit availability, availability of labor, availability and cost of feed, fertilizer, and probiotics, environmental restrictions, and national planning regulations, Costs of import and export, Proximity to a currently active market.

Major techniques used in shrimp culture are:

Intensive systems, semi-extensive systems, super intensive nursery systems, super intensive systems, biofloc technology, Multi-phase production systems. Extreme water conditions like freshwater and high salinity are ideal for culture. Highly recommend a technique for shrimp farming is the Closed Recirculating System (CRS).

Closed recirculation systems: Existing semi-intensive and super-intensive systems can both benefit from a closed recirculation system. Installation and operation of a recirculation system for the water utilized during the grow-out stage of shrimps are required in closed recirculation systems. The culture water is continuously reused and treated to maintain a water quality

suitable for the growth of shrimp or fish. The following components can be observed in a closed recirculation system: Solids filter in the culture basin removes suspended particles. Denitrification reduces nitrate products while also balancing pH and alkalinity. Nitrification removes organic debris and ammonia products using a reservoir and a biofilter. Sludge removal and disposal.

Integrated manure denitrification system: The concentrated waste flow from a shrimp or fish farm system, which contains dissolved and particulate fecal organic waste, bacterial flocs, and inorganic compounds, is fed into the integrated manure denitrification system. Fecal particulate carbonaceous waste is digested by denitrifying bacteria in the bioreactor sludge, resulting in the production of bacterial biomass, the reduction of nitrate into nitrogen gas, production of carbon dioxide, the production of alkalinity, mineralization and sludge reduction. The particulate debris in the sludge bed also acts as a growing medium for denitrifying bacteria. Sludge is removed from the bioreactor using a proprietary filtering device and may be released from the system as needed. The technique used depends on the species being cultivated; however, it might include a hybrid system that combines heterotrophic and autotrophic bacterial flocs with clear water and probiotics.

Besides just growing and exporting high-quality shrimp in tanks, shrimp aquaculture also supports several auxiliary sectors that have become increasingly reliant on it. Equipment, chemicals, transportation, equipment, marketing, medicines, and research and development are all included. One of the most difficult aspects of raising seafood is the perishable nature of the goods. Traditionally, when shrimp are harvested from water bodies, they must travel a great distance to the marketplace to reach clients. This necessitates a significant amount of resources to transport and preserve the shrimp. Shrimp farms strategically located in important sections of a country assist in access to the marketplace. As a result, clients may be assured that the items they get are both fresh and well-preserved [1-5].

CONCLUSION

The most popular types of seafood on the globe are shrimp. The demand for these exquisite and healthy cuts of meat will only

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grow in the future. As a result, it is critical to reduce dependency on natural shrimp and prawn supplies from the seas and oceans, as this is an unsustainable source of these foods. Instead, this is the moment to develop and perfect the shrimp farming and fish farming processes in general. Even though this system has been around for almost five decades, it still has several difficulties that need to be addressed. However, given the potential of this sort of farming, it would be negligent if they did not focus on efforts of refining the shrimp farming process.

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