

Advantages and Different Techniques of Fish Farming in Aquaculture Industry

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DESCRIPTION

Fish Production, also known as Fish Farming, is a type of Aquaculture that involves the cultivation and nurturing of various fish species. Fish is heavy in proteins, vitamins like D and B2, calcium, and other minerals. Previously, fish production consisted solely of collecting fish from freshwater. Pisciculture, or fish farming, is now a more common and widely utilized method of producing fish. Pisciculture is a process of growing, breeding, and transporting fish for economic purposes. Previously, fish capturing was the most common method, and the fish were primarily collected for industrial purposes. China alone accounts for more than 60% of global fish production.

Global fish requirements are increasing daily, resulting in overfishing and a decrease in fish species in some locations. As a result, fish are now farmed after developing fish colonies with regulated breeding that are protected from predators and well-supplied for nutrition. Fish aquaculture is classified into three types: Polyculture, Monoculture, and Monosex Culture.

Monoculture

It is the technique of producing only one type of fish at a time. It takes up more space but produces higher-quality output. This type of farming method is typically used by small businesses, and the fish are well-liked by consumers. Shrimp production is an example of monoculture.

Polyculture

It is often known as mixed farming, is the technique of raising various fish in the same location at the same time. Polyculture, in a sense, provides an artificial ecosystem for fish by increasing diversity. Diverse types of fish with different feeding patterns are kept in the same pond so that they can all thrive and not compete for food from the same source. It also necessitates appropriate management because different species have varying development rates, harvest requirements, environmental factors, and so on. For industrial purposes, large enterprises and large farmers rely on this pisciculture approach. This strategy yields great yields in tiny areas but necessitates careful management.

Monosex culture

The Monoculture farming method cultivates either male or female fish species. Monosex culture refers to the cultivation of only one of the male and female species. There are several methods of fish aquaculture. Among them are mentioned below,

Cage method

In this method, a net or metal cage is placed in an existing body of water or pond, allowing water to flow but not the fish. Fixed cages, floating cages, submerged cages, and submersible cages are the four types of fish-rearing cages. This technology is economically viable because it does not necessitate separate property with a consistent flow of water. It is possible to establish it in existing ponds and bodies of water. Many coastal areas in India are suitable for fish production but are underutilized. The cage approach can make use of these. Because the investment is modest, fishermen can easily adopt this strategy.

Pond method

This method involves the installation of a pond or tank. The location and environment of the pond are critical in this procedure. Watershed and levee systems are the two sorts of pond approaches. The watershed system should be used in areas where rainfall is enough, and the levee system should be used in areas where groundwater is the primary supply of water. This procedure depends upon soil type, features, geography, and water availability.

Integrated recycling system

This farming system is designed to produce no trash. This technique makes use of big plastic tanks housed within a greenhouse. It also has hydroponic beds that are located nearby. It reduces waste because the used water is progressively moved to the hydroponic beds, where it offers nutrients to the plants. This is kept in the greenhouse since it adapts to practically all climates.

Classic fry farming

In Classic Fry Farming, fish are raised from eggs to fingerlings before being put into stream water.

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CONCLUSION

The benefits of fish farming include fish which is a low-cost source of vitamins, proteins, and minerals. Fish growth may be managed, and the farmer can choose whatever species of fish to raise. Effective land usage, empty land can be used for low-cost fish

farming if properly prepared. As the demand for fish grows, raising fish will become lucrative due to the low startup costs and high returns. Fish farming does not necessitate a large number of resources; a simple tank or pond would suffice. Fish aquaculture is similarly low risk because the fish are kept in captivity. An outsider cannot readily gain access to fish.