

## Note on Benefits of Aquaculture

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### DESCRIPTION

Aquaculture is a type of aquaculture that involves the controlled production of aquatic animals and plants for human use. Aquaculture produces a variety of aquatic species such as crustaceans, fishes, mollusks, algae, and aquatic plants are all examples. Aquaculture and fish farming are both methods of breeding and growing aquatic species. Both freshwater and saltwater species are largely used for commercial reasons. Indeed, it is carried out under carefully regulated settings to provide a perfect habitat for aquatic species survival and growth. The most common type of aquaculture is fish farming. It is a way of artificially raising fish for reproduction and shipping. Large tanks are typically used to produce fish for commercial purposes. Aquaculture has been around for millennia and has become better through time. In protected coastal locations, fishes swim freely in enormous net constructions. It ensures that the fish have constant access to clean water and activity, resulting in healthy, lean, and firm fish. Human involvement is necessary for aquaculture to stock water with seed, fertilize the water, feed the organisms, and maintain water quality, to name a few examples.

### TYPES OF AQUACULTURE

The following are the various types of aquaculture: Mariculture, Integrated Multitrophic Aquaculture, Algaculture, and Fish Farming.

#### Mari culture

It is a type of aquaculture that involves the cultivation of marine creatures and plants in their natural environments, usually for food and other goods such as food additives, jewelry (e.g. cultured pearls), medicines, nutraceuticals, and cosmetics. Prawns and other shellfish, seaweed, mollusks, and other organisms are cultivated in this sort of aquaculture.

#### Fish farming

It is the most extensively used of all the many forms of aquaculture. Fish are selectively bred for human and commercial use. Aqua farmers like this type of aquaculture because of the multiple benefits it brings to both the farmer and the client. This is because fish, being a low-cost source of protein, are consumed by a large section of the world's population, resulting

in high returns on investment for fish farmers engaged in this sort of aquaculture. Fish farming is also easier to conduct than other forms of aquaculture since it does not require as much land and requires less attention. The essential requirements to maintain fish farms are suitable temperatures, a sufficient quantity of food, and adequate water.

#### Alga culture

The cultivation of algae is the objective of this type of aquaculture. Algae are a diverse collection of creatures that resemble plants. Photosynthesis is a process through which most algae use the energy of sunshine to produce their sustenance. Algae lack roots, leaves, and other plant-like characteristics. Microalgae (phytoplankton, microphytes, or planktonic algae) and macroalgae (commonly known as seaweed) are the majority of the algae collected. Hydroponics is a method of growing plants in which the roots are directly exposed to water. A floating plant pond is a modified pond that has been adapted to include floating plants (macrophytes). Hyacinths and duckweed float in them, their roots hanging in the water, absorbing nutrients and filtering the flowing water.

#### Integrated multi trophic aquaculture

It's a productive aquaculture system that resembles the ecology of aquatic plants and animals in their native habitat. It leads to more balanced ecosystems which make environmental cleanup simpler. Better aqua farm output, product diversity, risk reduction, cheaper costs, and social acceptability all contribute to economic stability.

### CONCLUSION

By improving management methods, aqua farm output, product diversification, risk reduction, and cost reduction may be able to be achieved. Shellfish are the most productive of all aqua cultured aquatic creatures. They are no external food source required since they can feed themselves by filtering the water for nutrients. As they eat, they purify the water. In conclusion, aquaculture is essential for the effective functioning of the food sector as well as other businesses that use aquaculture outputs as their beginning materials for production.

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**Received:** 05-Jan-2022, Manuscript No. FAJ-22-16670 **Editor assigned:** 07-Jan-2022, PreQC No. FAJ-22-16670 (PQ); **Reviewed:** 21-Jan-2022, QC No. FAJ-22-16670; **Revised:** 26-Jan-2022, Manuscript No. FAJ-22-16670 (R); **Published:** 02-Feb-2022, DOI: 10.35248/ 2150-3508.22.289.

**Citation:** Sam I (2022) Note on Benefits of Aquaculture. Fish Aqua J.13:289.

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