

Towards blue revolution



Biofloc Technology

In Aquaculture

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what is biofloc technology?

Biofloc technology (BFT) is an aquaculture approach based on in situ microorganism generation that is environment friendly. Because of its low cost and high yields, biofloc technology is gaining popularity. To get started with the BFT for farming, all you need is sunlight, aeration, and a carbohydrate source. The BFT is effective in all areas, including production, quality, sustainability, and environmental safety. Fish and shrimp are farmed intensively with or little water exchange.

In addition, macro aggregate (biofloc) development requires continuous water movement over the whole water column. Nutrients in water will naturally aid in the establishment and stabilization of heterotrophic microbial communities. Because nutrients may be continually recycled and reused in the culture medium with minimal or no water exchange, BFT is considered the new "blue revolution." Furthermore, the sustainable approach of such a system is based on high fish/shrimp output in small regions.

Microorganisms in Biofloc have three main functions:

- (i) Water quality improvement via nitrogen compound uptake, resulting in situ microbial protein;
- (ii) Nutrition, reduced feed conversion ratio (FCR)
- (iii) Disease resistance.

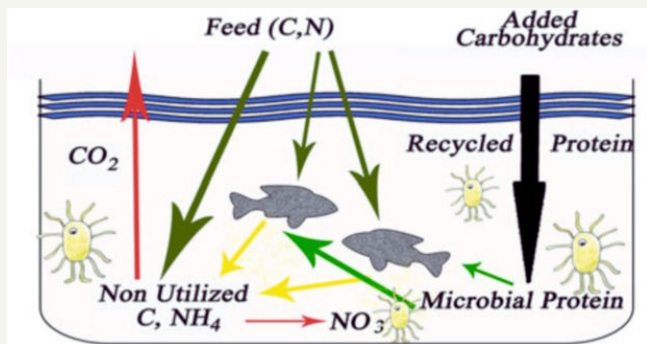


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Biofloc fish farming

FISH SPECIES CULTURED

The Biofloc systems are better for organisms that can withstand high solids concentrations in water and are adaptable to poor water quality in general.

Basa fish (*Pangasianodon hypophthalmus*)
Indian major carps (Catla, Rohu, Mrigal)
Tilapia (*Oreochromis niloticus*),
Milkfish (*Chanos chanos*)
Vannamei (*Litopenaeus vannamei*)
Tiger Shrimp (*Penaeus monodon*)
Magur (*H. fossilis*)

Advantages

- Environmentally beneficial culture system.
- It has less impact on the environment.
- Judicial utilization of land and water resources
- Fish culture system with no water exchange
- Higher fish production than other fish culture systems.
- Biosecurity is improved.
- Reduces pathogen introduction and disease transmission.
- It is relatively less expensive when compared to other systems

Disadvantages

- An enormous quantity of energy is required for mixing and oxygenation.
- A start-up stage is necessary.
- Supplementing with alkalinity is necessary.
- Sunlight-exposed systems have an uneven and annual operation.

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