

Aerators, pumps and filters

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- Sedimentation removes a large percentage of suspended solids and organic matter present in the water. But, however fine colloidal matter and bacteria present in water cannot be removed.
- Types of mechanical filters Two types of mechanical filters commonly used in hatchery systems are as follows 1. Slow sand filter 2. Rapid sand filter

- **BIOLOGICAL FILTRATION:**
- It comprises the mineralization of organic nitrogenous compounds, nitrification, and denitrification by bacteria suspended in the water and attached to the gravel in fine bed. Bio-filter should be kept away from sunlight to avoid algal growth, which may affect the process.

- Types of biofilters used in aquaculture are trickling, submerged, updraft and rotating disc filters. Types of biological filters used in aquaculture.
- 1. Trickling Filter
- 2. Submerged Filter
- 3. Rotating disc Filter
- 4. Bio-disc Filter
- 5. Bio-drum Filter
- 6. Fluidized bed Filter

Pumps

- Pumps are the mechanical devices used for lifting water or any fluid at higher elevation or at higher pressure.
- TYPES OF PUMPS
- (A) Centrifugal pumps
- (B) Reciprocating pumps
- (C) Submersible pumps

Aeration

- Aeration is a mechanical process of bringing the water in intimate contact with air, with an aim of adding oxygen to water. More simply, aeration is the addition of oxygen to water.

- Aerators are devices used to increase in the concentration of dissolved oxygen in the aqua culture system.
- TYPES OF AERATORS: Aerators are classified into following groups
 - A. Gravity Aerators
 - B. Surface Aerators
 - C. Diffuser Aerators
 - D. Turbine Aerators