

Technology No. 15

TIMER-BASED POWER OPERATED PROTOTYPE WATER FILTRATION SYSTEM FOR AQUACULTURE

Inventors: Dr. A.K. Verma, Dr. Chandrakant, M.H., Dr. B. B. Nayak

Technical details:

Aquaculture industry is progressing quickly over the past few decades. This rapid growth has resulted in competition for natural resources i.e. land and water. Apart from strong annual growth, the culture of fish over the past few decades has also been strongly intensified. This intensification has significant drawbacks such as an increased environmental impact due to larger amount of waste discharged in the form of effluent. Aquaculture, like other animal- production sector generates biological wastes but unlike other sectors, the aquatic animals cannot separate their living space from their area of excretion. This causes deterioration in water quality due to ammonical excretion inside the aquaculture production system leading to poor growth and an increase in the incidences of diseases. Management of the waste generated from aquaculture is quite difficult and costly as the waste disintegrated becomes diluted in the culture water. Treatment of wastewater demands large investment and sophisticated equipment.

Feed is the main source of waste and is also responsible for most of the environmental impact of aquaculture, and water quality is a critical factor when culturing any aquatic organism. Optimal water quality varies by species and must be monitored to ensure growth and survival. The quality of water in aquaculture production systems can significantly affect the organism's health and the costs associated. Therefore, removal of particles from water flow is important in aquaculture. Suspended solids, dissolved solids, and organic matter are removed from water by filtration of water through suitable media.

Salient features of the technology:

- Keep system clean
- Helps to improve water quality
- Which help to keep fishes healthy



Prototype of filter in Aquarium

Contact details:

- Dr. A.K. Verma, Senior scientist, Aquaculture Division, ICAR-CIFE, Mumbai
E-mail ID: akverma@cife.edu.in
Contact No.: 9920169789
-