LIVE FEED CULTURE FOR FISHES

Fishes prefer live feeds to artificial food. The natural live feed organisms supply nutrients for healthy vigorous growth. They also produce bright and brilliant colouration in fishes. Therefore a culture of live feed is necessary for their continuous supply.

Q.What is batch culture?

Culture of Phytoplankton

Batch culture:

This is the simplest and most widely practiced technique. The technique consists of a single inoculation of cells into a container of nutrient enriched-water.

Nutrient (NPK-in the ratio of 5:15:3) are added to the water. The commercial fertilizers used in the purpose are Urea (107ppm), single superphosphate (1071ppm) and muriate of potash (77ppm) per litre of water.

The pH of the medium is maintained at-8.5. It is grown for 7 to 5 days and harvested.

Q.State the importance of infusorians. Q.What is the use of infusorians in fish culture?

CULTURE OF INFUSORIANS (*any of a heterogeneous group of minute organisms found especially in water with decomposing organic matter especially: a ciliated protozoan***)**

i)Infusorians are *microorganisms* found in stagnant infusions of animal or vegetable matter.

ii)The materials used for culturing infusorians include hay, banana peels, dried beans, lettuce, cabbage, egg yolk, malted milk, skimmed milk, dried blood, spinach. Dried aquatic plants etc.

iii)A medium may first be prepared by any one of the ingredients. It is then diluted with freshwater, kept in plastic troughs or cement tank of 50-100 litre capacity.

iv)The fertilized water medium must be covered with velon screen and allowed for bacterial development, fermentation and subsequent *leaching of nutrients.*

v)Within 7-8 days, the water turn greenish which indicates the production of infusorians.

vi)A mild aeration and alkaline condition (8-9) may enhance the production of infusorians.

Q.What is the importance of Artemia culture? Q.How to initiate *Artemia* culture?

i) *Artemia* are commonly known as sea monkey or brine shrimp.

ii)They inhibit *salt pan waters* of more than 200% salt content.

iii)Their cyst can be stored for many years. For laboratory hatching, the dried cysts are allowed to float on surface of filtered normal sea water.

iv)The cysts hatch in 24-48 hours depending on the ambient temperature.

v)Prior to hatching hypochlorite or potassium hypochlorite which helps in the removal of the chorion in 5-10 seconds.

vi)Eggs can also be incubated in a solution made up of 2 teaspoons of common salt mixed in 1 Litre of freshwater.

vii)For mass culture of *Artemia,* about 250 gm of cysts are a sprinkled in 100 litre of 30-35% sea water.

ix)Temperature must be maintained at 26-30°C.

x)Vigorous aeration is necessary to hasten the hatching

xi)Temperature must be maintained at 26 -30 °C.

xii)They can be transferred to container of fish or prawns larvae as a live food.

xiii)They can also be stored in fridge dried form for continuous supply of eggs, young brine shrimps may be fed from 3rd day onwards with yeast and unicellular algae.

xiv)Adult brine shrimp also be developed in cement thanks containing 60 ppt of salt water and organic manure.

xv)The food particles supplies should be less than 60 micron size.

xvi)The cyst could be used for mass mass culture in hatcheries.

The cysts are hatched at 30ppt saltwater or normal sea water.

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