

**IMPORTANCE OF PLANKTONS IN AQUACULTURE****Shubhashree Khadgaray and Sujit Kumar Mishra**

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**ABSTRACT:-**

Plankton is the live food organisms of the water bodies. It may be found in all types of water sources. Biologically planktons are divided into 2 categories one is the phytoplankton and another one is the zooplanktons. Phytoplanktons stands for the plank based animalcules and zooplanktons stands for the animal based animalcules. The phytoplankton is named as the primary food source for the water living animals. Some times the zooplanktons are also named as the primary food source for some animals. Both the phytoplankton and zooplanktons are protein rich sources and nutritive in nature. It digest very easily so that the water living organisms take the planktons as the food source and proceeds their life cycles.

Some how the water color of the pond and other water sources are put impact on the water living fish or shellfish larvae. Mainly the water transparency put more impact on the water living animalcules. Some time the artificial live food is given to the larvae which costs more and also not available so easily. The artificial live foods are not that much nutritious as compared to the phytoplanktons and zooplanktons .

**KEY WORDS:-**planktons, zooplankton, phytoplankton, live foods ,rotifer, artemia, copepods, water turbidity ,water transparency .

**1 INTRODUCTION:-**

The word plankton is originated from a Greek word( planao) meaning stands for (to wander),these are the water loving organisms that hamper the water column.(that is they live away from the seabed, in the pelagic realm)and which by their dip immobility or weak swimming capacity are progress horizontally at the grace of currents(ocean current velocities are highly variable but are in the order of about 0.1 to 1 meter per second; millimeter scale crustacean zooplankton swim at only tens of meter per hour) planktons are taxonomically different, consists of plant, animal, bacteria and viruses. Worldwide the biomasses of phytoplanktons and zooplanktons are about to equal, although the doubling time of zooplanktons (typically some weeks to months) is considerably longer then the phytoplanktons(some hours to days)[1].

Mainly the size of planktons are sub millimeter to millimeter, but together the dimensions span several orders of immensity ,and zooplankton involves jellyfish with tentacles dragging many meters. The observation of the ocean facing public is secured principally upon huge and charming marine animals such as whales, albatrosses, and polar bears,still it is the plankton and bacteria that together fuel the engine room of the ocean[1]. In plankton there is no self-propelled movement. The current in the surrounding water move them. This type of motion assists to scatter the organisms throughout a body of water. In the water column plankton have the pelagic zone, which is named pelagic inhabitants after that[2].

Fish is the farming organism it receives nutrients other than minerals by taking food. Planktons serves as the live food for the most organisms who are surviving by consuming live food. However some living organism take dead particles as food. Most aquatic larvae depend on phytoplankton as primary food. The larvae of most species eat both zooplanktons as well as phytoplanktons after a certain period of time. Phytoplankton describes the all plant component on the water body and the zooplankton describes all the entire animal component. The productivity of water body enhanced by planktons.

**2. TYPES OF PLANKTONS:-**

As we know the plant like community of plankton is phytoplankton and the animal like community is described as zooplankton. Many organisms are there which are neither plant nor animal but better than protists.

**2.1 PHYTOPLANKTONS:-**

the word phytoplankton splits into two Greek word phyto means plant and plankton stands for wanderer. There are many varieties of phytoplanktons are there which are blessing of oceanic currents. The water current helps them for transport from area to area that are suitable for their survival and growth physical