An experimental study of the culture of the water flea (*Moina micrura*) in different culture media

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Abstract

In ornamental fish culture, live feed may increase the growth and survival rate of the juveniles of many species, and the water flea (*Moina micrura*) has been shown to be an excellent natural food for raising economically important fish. Laboratory and field experiments were carried out to develop techniques for the mass production of water fleas with different media such as freshly cultured unicellular algae, *Chlorella* and organic manure.

The type of food ingested by *Moina* was observed to include bacteria, small protozoa, *Chlorella* sp. and decomposed organic matter. The production trials were carried out in round fibre glass tanks (600 liter capacity) which were enriched with inorganic fertilizers, *Chlorella* and cow dung. Water temperature and pH were measured daily. Initial stocking of 2000-3000 individuals of *Moina* with inorganic fertilizer and *Chlorella* produced 6.5±0.14 number/ml on the sixth day of the culture period which was significantly higher ($P<0.05$) than that which resulted with the loading of cow dung as organic fertilizer (3.05±0.07 number/ml). Surface water temperature was 27.5 - 29.0° C and 27.13 - 28.13 ° C and water pH was 7.25 – 8.45 and 7.30 – 8.10 in culture with *Chlorella* and organic manure, respectively, which were conductive for optimum growth of *Moina*. The pH of water in all the tanks declined towards the end of the culture period.

Propagation and growth of water flea – *Moina* was much higher after loading of inorganic fertilizers with inoculation of *Chlorella* when compared to loading cow dung as organic fertilizer ($P<0.05$). The quantity of *Moina* sp. produced using the *Chlorella* was more suitable for commercial production.

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