

(Jaggery, Tapioca and Sorghum flour) in the ratio of 20:1 (C/N) along with one control. Lower Total Ammonia-N (TAN) and Nitrite were observed in biofloc based treatments compared to control. Treatment based on Jaggery showed higher floc volume compared to other treatments. The growth of Jayanti rohu was significantly higher in biofloc treatments and FCR was significantly lower. Fish survival was better in biofloc based treatments (96.66%) as compared to 90% survival in control. On the final day of the experiment, biofloc was collected and evaluated for its proximate composition. The highest protein content (50.43±0.20%) was in Jaggery based system and the lipid percentage (2.66±2.16%) was more in Tapioca based system. Carcass composition of Jayanti rohu showed higher protein content (21.98±0.21%) in Jaggery based system. From the results, it can be concluded that Jaggery is the best among the three carbon sources for rearing of Jayanti rohu in biofloc system.

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Effect of stocking density on growth and survival of *Fenneropenaeus merguensis* (de man, 1888) post larvae

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The present study evaluated the effect of stocking density on growth and survival of post larvae (PL) of *Fenneropenaeus merguensis* (de Man, 1888), commonly known as banana shrimp. PL was stocked at four different densities i.e., 10, 20, 30 and

40/m² (T1, T2, T3 and T4, respectively) and reared for a period of 60 days. Water quality and growth performance parameters of different treatments were compared during the experiment. A significant (p<0.05) decrease in dissolved oxygen (DO) concentration relative with the higher stocking density was observed. Though some of the parameters showed significant (p<0.05) difference among the treatments, the water quality remained within safe level, throughout the experiment. Increase in stocking density led to significant reduction (p<0.05) in BWG and SGR of PL. The highest value of FCR was in T4 and lowest in T1. Stocking density also showed an inverse relationship with survival percentage of shrimp. Results of the present study revealed that high stocking density (≥30/m²) can seriously impair the growth of post larvae of *F. merguensis*.

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Effects of changes in physico-chemical properties of water for mass production of *Daphnia* sp.

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The experiment was carried out to study the effects of changes in physico-chemical properties of culture water during mass production of *Daphnia* using organic waste and its effect on the production of *Daphnia*. Eleven treatments (T₁–T₁₁), with different combination of organic waste and their doses were used in this experiment. Physico-chemical characteristics of water play an important role in regulating the growth and reproduction rate of *Daphnia* sp.