ABSTRACT

APPLICATION OF BIOFLOCK SYSTEM WITH VARIANS FEEDING RATE TOWARDS THE CULTIVATION OF CATFISH (*Clarias gariepinus*)

By

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Autotroph system that is applied on common catfish aquaculture has a limitation on its waste management, mainly in the form of Total Ammonia Nitrogen (TAN). Therefore we need a system that is more efficient in utilizing waste aquaculture. Heterotrophic system is one of the applications that are expected to overcome the problem of low feed efficiency by utilizing heterotrophic bacteria to convert inorganic nitrogen into organic nitrogen in the form of bacterial biomass as a feed supplement for catfish that is called as bioflock. The objectives of this research were to analyse the growth and survival rate of catfish with different feeding rate. This research is an experimental research. Complete Randomized Design (CRD) was used in this research which consists of 5 treatments and each treatment was repeated 3 times. The treatment are shown as follow; (A) application of bioflock system with FR 5% (B) FR 3.75% (C) FR 2.5% (D) FR 1.25% and (E) applications of bioflock system without artificial feed. The study was conducted using 5 cm long catfish seeds with an average weight of 1 gram. The parameters of the research include absolute growth, growth rate, survival and quality of water. The results showed that the bioflock system with 5% of feeding rate has a significant effect on growth by producing catfish weighing 10.85 grams on average. The highest value of daily growth rate is bioflock system with 5% of feeding rate with 0,35 gram/day. Meanwhile for the highest survival rate, bioflock system with 3,75% of feeding rate with 94,16 %. The water quality parameters measured, namely temperature, pH level, dissolved oxygen (DO), and ammonia indicated optimum figures for catfish aquaculture.

Keywords : catfish, bioflock, feeding rate, growth and survival rate