

ABSTRACT

ANALYSIS OF DIFFERENT C:N RATIO ON RED TILAPIA (*Oreochromis niloticus*) GROWTH IN BIOFLOC SYSTEM

BY

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The development of tilapia farming processes affect the increase in waste waters. Biofloc technology is an alternative to overcome the problem of water quality in aquaculture and utilized as an additional food source for tilapia. This study was conducted to analyze the growth and the survival rate of red tilapia in biofloc system with different C:N ratio. The design of the research was a completely randomized design (CRD) with four treatments and three replications. The treatments were tested, namely (A) control, (B) C:N ratio of 15, (C) C:N ratio of 20, and (D) C:N ratio of 25. Study was done using red tilapia fingerlings 3 cm with an average weight 2 ± 0.4 g were kept in an aquarium measuring 40x30x35 cm³. Key measurements include absolute growth, specific growth rate, survival, Feed Conversion Ratio (FCR), Protein Efficiency Ratio (PER), and water quality. The range of tilapia specific growth rate was 12,17% - 16,33% and the range of survival rate of tilapia was 53,33% -80%. The best treatment was treatment of B (C:N ratio of 15).

Keywords : Tilapia, biofloc, ratio C:N, the growth and the survival rate.