Abstract

Tilapia (Oreochromis niloticus) cultivation requires effective natural feed alternatives to increase growth, survival, and production cost efficiency. This study aims to analyze the effect of various types of natural feed and determine the best feed on the growth and survival of tilapia fry. The study used an experimental method with a Completely Randomized Design (CRD) consisting of three treatments: silkworms, earthworms, and snails, each with three replications. The observed parameters included absolute length growth, absolute weight, survival, and water quality, which were analyzed using ANOVA. The results showed that the provision of various types of natural feed had no significant effect (P>0.05) on the absolute length growth, absolute weight, and survival of tilapia fry. However, silkworms produced the highest absolute length and weight growth of 2.99 cm and 6.37 g, respectively, while snails produced the highest survival rate of 86.66%. Water quality during the study was within the optimal range with a temperature of 26.3–26.8°C, pH 7.6–7.9, and DO 5.2–5.6 mg/L, thus supporting successful rearing and not being a limiting factor. Future research is recommended to use more replications, longer rearing durations, and testing natural feed combinations to obtain more accurate results.

Keywords: *Tilapia fry; Snails; Silkworms; Survival; Growth.*