

Sadek, M.F.A., Nabawi, S.S.M., Metwaly, A.A.A. and Abou Zied, R.M. (2020). Effect of some Protein Sources on White Shrimp Production under Lake Qarun Condition. J. of Animal and Poultry Production, Mansoura Univ., 11 (5):183 – 187.

Abstract

The present study was conducted at Shakshouk Fish Research Station, Fayoum Governorate, National Institute of Oceanography and Fisheries (NIOF), Egypt to investigate the effect of protein sources (fish meal (FM), meat meal (MM), and FM + MM and plant protein (corn gluten meal CGM)) on growth parameter, feed utilization, carcass chemical composition and economic efficiency. Pacific white shrimp (*Litopenaeus vannamei*) juvenile with an average weight of 3 ± 0.13 g initial body weight were randomly distributed into eight rectangular fiberglass tanks of 1.5 m³ water capacity at a rate of 40 juveniles/ tank. The experiment was carried out from 21 September 2019 and continued for 80 days. The result showed that, survival rate was within the range 86.25–97.50%, with significant differences were observed. The highest total weight gain, daily gain and SGR values were obtained with the FM diet compared with the other diets (FM+MM, MM and CGM). The best FCR (lowest) was recorded with shrimp fed on FM, with insignificant differences among (FM, MM and FM+MM). The worst FCR was recorded with shrimp fed on CGM. The lowest protein content was recorded with shrimp fed on CGM; also the highest content of EE was with (CGM) diet. The best net returned and economic efficiency was recorded with diets contained fish meal followed by diet contained fish meal + meat meal then meat meal and the least CGM. These results indicated that the best growth rate for shrimp was obtained with feeding FM diet then feeding on FM+MM and MM diets under experimental conditions.

Keywords: Pacific white shrimp, protein sources, growth performance, feed utilization, carcass chemical composition, survival rate, economic efficiency.