



Use of Some Alternative Feeding Strategy to Reduce the Production Cost of the Cultivated Common Carp *Cyprinus carpio*

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ABSTRACT

This study evaluated alternative feeding strategies in the production of common carp in floating cages. A total of 600 common carp fish with an average weight of 103.2 ± 37.0 g were distributed in the cages at a density of 50 fish/ cage. Three replications were used for each treatment for the period from 15/12/2021 to 1/12/2022, under three feeding strategies and control treatment. T1 consisted of continuous feeding with a 30% protein content, while T2 involved an alternative feeding, switching between a 30% protein feed and a 20% protein feed on consecutive days. T3 included two days of feeding with a 30% protein diet followed by a day of a 20% protein diet, and T4 involved three days of feeding with a 30% protein diet followed by a day of a 20% protein diet. The results showed that no significant difference ($P > 0.05$) in WG, DGR, RGR and SGR of the fish between continuous feeding and alternative feeding at the end of the experiment, and the feed conversion rate (FCR) was not affected by the different protein levels. T2 exhibited superiority ($P \leq 0.05$) in protein efficiency ratio (PER), recording a value of 1.10, whereas the control treatment had a lower value. There was no significant difference in the condition factor between the different treatments. T4 recorded the best economic benefit (1.2) among the different treatments. No significant difference was detected in the protein of the fish body between the treatments, while the value of the fat increased with the alternative feeding, and the treatment before the experiment recorded the best value of body fat with 6.32.

INTRODUCTION

Fish production is considered one of the important sectors in the agricultural field, and it has a large and important economic return for countries of the world due to its role in achieving high levels of self-sufficiency. It is also considered one of the basic pillars of the livestock production base due to its crucial role in global nutrition and food security. It represents an important source in diverse and healthy dietary patterns since it contains good levels of proteins and fats with a high percentage of unsaturated fatty acids (PUFA) in addition to essential amino acids and micronutrients, including iron, iodine, and vitamins A and D, as well as calcium and phosphorus, which are lacking in most animal food products (Jie et al., 2017). The contribution of capture fisheries as a source of food fish was