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GROWTH PERFORMANCE OF EEL (ANGUILIA ANGUILA), NILE TILAPIA (OREOCHROMIS NILOTICUS) AND GREY MULLET (MUGIL CEPHALUS) CULTURED IN CAGES UNDR TWO FEEDING SYSTEM

Abdel- Hakim, N.F.[1] ; Bakeer, M.N. [2] and Soltan, M.A[3]

1-Fac. Agric. Al-Azhar university.
2- Central Laboratory fo Aquaculture Research Abase, Sharkia governorate, Egypt.
3- Fact. Agric.Moshtohor, Zagazig University, Banha Branch.

Abstract

The present experiment was carried out during one growing season for 240 days in cages. The objective of the study was to investigate growth performance of levers reared cage in polyculture system with Nile tilapia and mullet using a commercial diet plus trash fish under the Egyptian conditions. Also the study aimed to develop a guideline for fish farmers to improve their production level. The three treatments applied were commercial diet containing (45%crude protein) plus trash fish (Tr1), commercial diet (20%crude protein) plus trash fish (Tr2) and the same diet as (Tr2) but without eel stock (Tr3). Each treatments was performed in triplicates. Cages used in this study were $3\times5\times5$ m^3 in diameters and stocked with 500 eel levers (35 g average weight) 2000 Nile tilapia (25 g average weight) and 1000 Grey mullet with an average weight 22 g at the experimental start except thr Tr3, which was stocked with tilapia (2000) and mullet (1000) without eels and received the same dietary treatment as in Tr2. Fish of both treatments were fed on the commercial diets plus the trash fish at a rate of 2 to 1 according to the fish biomass of each cage. Results obtained can be summarized as follows:

1- Final average of body weight for eels, Grey mullet and Nile tilapia in treatment1(commercial diet 45% crud protein plus trash fish)were significantly higher than their corresponding species in the other treatments.

2-Final fish weight of eel, Nile tilapia and Grey mullet per cage in treatment 1 were 93.3 399 and 170.2 Kg, respectively, which were higher by 6.7, 18 and 13.5 % than that obtained in the other treatments.

3- Net returns in LE per cage were 2010.7, 2320.3 and 1187.4 LE for treatments Tr1, Tr2 and Tr3, respectively. Based on the results obtained in this study, a polyculture of eel, Nile tilapia and Grey mullet could be applied in cages using a mixture of commercial diet contaning 45%protein with trash fish at a ritio of 2 to 1 for best yeiled and growth performance. However the highest net returns were achieved using the 20% protein diet with trash fish due to the lower costs of the diet.

Keywords: Cages, culture, eel, tilapia, mullet