

**EVALUATION OF APPARENT DIGESTIBILITY COEFFICIENT OF  
DIFFERENT DIETARY FISH MEAL PRODUCTS IN THE LOCAL  
MARKET AND THEIR EFFECT OF GROWTH PARAMETERS OF  
KOI (*Cyprinus carpio*)**

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## ABSTRACT

The present study was carried out to investigate the optimum protein digestibility in four different types of fishmeal products, Peliyagoda fishmeal, Knife fishmeal and imported fishmeals from Maldives and Denmark for fingerling stage of KOI (*Cyprinus carpio*). Four experimental diets were formulated and prepared as treatment 1 containing Danish fish meal, treatment 2 containing knife fishmeal, treatment 3 containing Maldivian fishmeal and treatment 4 containing Paliyagoda fishmeal while control diet containing soya bean powder as including 29-34% crude protein (CP) content. Feeding trial was conducted for KOI fingerlings (mean initial weight  $17.0 \pm 0.09$  g) separately for (30) days. Three replicates were used for each treatment with 15 fish in each tank. Fish were fed two times per day until satiation and fecal materials were collected every morning by siphoning water with fecal matter. Wet weight and standard length of the fish were measured weekly. 1% of  $\text{Cr}_2\text{O}_3$  was incorporated in the diets to measure digestibility. Feed Conversion Ratio (FCR) Specific Growth Rate (SGR) and weight gain were calculated. Protein digestibility was analyzed by determining  $\text{Cr}_2\text{O}_3$  percentage using atomic absorption spectrophotometer. Data analysis was done by one-way ANOVA using Minitab 17 software. Tukey pairwise comparison was used to compare the mean values of growth performances. Results revealed that there is a significant difference ( $P < 0.05$ ) in FCR, SGR and weight gain and protein digestibility between the four treatments at ( $P < 0.05$ ) significance level. Due to high FCR SGR values and there is a significant difference ( $P < 0.05$ ) in Danish fishmeal so it could be suggested as suitable fish meal for producing KOI feed. However, according to the growth performances and digestibility Danish fishmeal can be suggested as suitable fishmeal for producing KOI fingerling feed.

Key words: Feed Conversion Ratio, Specific Growth Rate, Weight gain, Protein digestibility