

## **Effect of Imported and Locally Produced Fishmeal Incorporated Feed on Growth Performance, Feed Utilization and Survival of Guppy (*Poecilia reticulata* Peters, 1859)**

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The present study was conducted to evaluate the effect of imported and locally produced fishmeal incorporated feeds on the growth performance, feed utilization and survival rate of guppy, *Poecilia reticulata*. A commercial feed (CD- 40% Protein (P) and 3% Lipid (L)) was used as the Control. F1 diet (42.9% P, 10.7% L) contained imported fish meal (38.0%) while F2 diet (34.9% P; 7.5% L) contained local fish meal (32.0%). Male (0.28±0.02 g; 2.55±0.16 cm) and female (0.27±0.02 g; 2.71±0.11 cm) guppy fingerlings were separately introduced to 18 glass tanks (27 L) and fed respective diet for 56 days. Fish fed with CD showed significantly higher growth performance in terms of Total Length, Specific Growth Rate (SGR) in both male and female guppy compared to fish fed with F1 and F2. Also, fish fed with F1 and F2 diets did not show a significant difference in growth performance. Feed Conversion Ratio (FCR) and Protein Efficiency Ratio (PER) were significantly higher in males fed with CD compared to males in other two treatments. However, FCR or PER in females was not significantly different in three treatments. All fish showed more than 80% survival. The cost (LKR/kg) of CD, F1 and F2 were 450.00, 310.00 and 180.00 LKR respectively. The cost per unit production (LKR/kg) of F2 diet for both males and females were significantly lower than F1 diet and the cost per unit production of CD was significantly higher than formulated diets. Therefore, F2 diet which contained locally produced fishmeal is a cost-effective diet among the tested diets for guppy fingerlings.

**Keywords:** Guppy, Growth performance, Specific Growth Rate, Cost per unit production, Cost-effective feed