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Effect of Different Commercial Diets on the Growth Performance and Reproductive Performance of Guppy, *Poecilia Reticulata* (PETERS)

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A 15 week feeding trial was conducted to investigate the effects of three commercial diets; Prima diet, Galaxy diet and Prawn diet on the growth performance and reproductive performance of Guppy, *Poecilia reticulata*.

Triplicate groups of juveniles (mean initial weight of 0.07 ± 0.03 g) were stocked in 9 indoor glass aquaria (30 x 22 x 8.5cm), at a density of 20 fish tank⁻¹ at a sex ratio of 1 female: 1 male. Fish were fed *ad-libitum*, 5 times daily and food consumption was recorded daily. Total length and body weight were measured at 3 week intervals and % Specific Growth Rate (%SGR) and Food Conversion Ratio (FCR) were calculated. Weight of gonads and liver were measured at the end of the experiment. Time taken for first spawning, total number of larvae, spawning interval, gonadosomatic index (GSI) and hepatosomatic index (HSI) were calculated.

Daily food consumption was not different among three dietary treatments. Fish fed on Prawn diet showed significantly higher final body weight (0.83 ± 0.46 g), body length (4.63 ± 0.41 cm) and % SGR (2.34 ± 0.03) compared to fish fed on other two diets. Total body weight and GSI were found to be significantly higher ($p < 0.05$) in females compared to males in all treatments. Fish fed on Prawn diet recorded the significantly highest mean number of larvae per tank (33.67 ± 7.51). However, larval length showed no difference among three treatments.

In the present study significant highest growth and reproductive performance (in terms of number of larvae tank⁻¹) of guppy was observed in fish fed on Prawn diet. Therefore, for guppy broodstock rearing in indoor aquaria Prawn diet could be recommended as the best feed out of three commercial diets tested herein.

keywords: Guppy, *Poecilia reticulata*, commercial diets, growth, reproduction