

Development of a Low Cost Fish Feed for Rearing Ornamental Fish Guppy (*Poecilia reticulata*)

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Cost of feed is the main bottleneck for the development of ornamental fish industry in Sri Lanka. The present study concentrated on developing a low cost aqua feed for guppy (*Poecilia reticulata*) to reduce the burden of feed cost. Two aqua feed types (Aqua feed I, Aqua feed II) were prepared by using locally available feed ingredients and tested against a commercial feed (control). A total of 1350 *P. reticulata* fry of average length 2.76 ± 0.025 cm and average weight of $0.28 \text{ g} \pm 0.03$ g were used to determine the performance of the two feed types. Complete randomized block design was used to analyze the data of the eight weeks feeding trial with three treatments which contained three replicates. Weights and lengths were measured biweekly. Growth performance and total cost of feed production parameters were assessed using the Feed Conversion Ratio (FOR), Specific Growth Rate (SGR) Survival rate, Weight gain, Condition Factor and Average daily growth (ADG). The trial groups reached a mean live length of 3.50 ± 0.0764 cm, 3.80 ± 0.0361 cm, 3.70 ± 0.0351 cm and mean live weight of 0.41 ± 0.06526 g, 0.62 ± 0.00541 g, 0.51 ± 0.07974 g at the end of the trial when fed with aqua feed I, aqua feed II and commercial feed respectively. Growth data indicates that the final length, weight, ADG, SGR and weight gain values of all three feeds were not significantly different ($P < 0.05$) but the best (lowest) mean FOR and condition factor was obtained from Aqua feed II ($P < 0.1$). Therefore, it can be concluded that aqua feed II is the best among three feeds.

Key words: Guppy, *Poecilia reticulata*, feed, growth, Aqua feed, Commercial feed