

## **Effect of different diets on growth and colour enhancement of red blonde variety of guppy (*Poecilia reticulata*)**

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Body colour and the faster growth are important requirements in ornamental fish industry. The experiment was carried out to determine the effect of different diets; Beef liver (Diet A), live feed - *Artemia* (Diet B), commercial feeds: Priema 0 (Diet C) and Priema 0 + Priema 999 (Diet D), and a laboratory formulated diet (Diet E) on fish growth and colour enhancement. Throughout the study period of 90 days (100 days old fish), fish fed with Diet B gained highest weight ( $0.61 \pm 0.024$ ) and length ( $3.53 \pm 0.042$ ) which was significantly different from the fish fed with rest of the diets. No significant difference observed in weight ( $p=0.056$ ) and length ( $p=0.267$ ) of fish fed with other four diets. Diet B recorded 58 times higher expenditure (Rs.450.00) than commercial diets and 4 times higher than the Diet A while Diet E recorded least expenditure (Rs.4.51). Red colour on body and fins and silver colour on belly is the marketable colour for red blond variety. Higher red colour intensity recorded from fish fed with Diet A while least red colouration showed by fish fed with Diet D. Fish fed with diet A also had bright silver colour on the belly side. Sex differentiation was possible in the fourth week in fish fed with Diet B while for other fish, it was at the eighth week of the experiment. Results indicated suitability of *Artemia* as a diet for early fry stage until the sex differentiation. When the growth and the cost is considered, Diet E is suitable for the grow out phase (after 30 days from birth) and this diet however should be improved to gain more red colour in guppy.

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