

DEVELOPMENT OF A FEED FOR GUPPY (*Poecilia reticulata*) GROWERS USING LOCALLY AVAILABLE RAW MATERIALS

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INTRODUCTION

Guppy (*Poecilia reticulata*) plays a major role in fresh water cultured ornamental fish industry in Sri Lanka. It contributes around 60% of the total export by number in the export market of fresh water cultured fish species. The higher cost of production is one of the major constraints faced by the ornamental fish industry with feed cost being over 65% of the total. In addition, disease occurs mainly due to sub-optimal conditions in the water source (Claude, 1982). Therefore, this experiment was performed to determine the suitability of the formulated feed using locally available raw materials for guppy grower feed.

MATERIALS AND METHODS

Feeding trials were conducted at Sarani Aquariums (Pvt.) Ltd., Kolinjadiya, Wennappuwa and feed preparation and the laboratory analysis were carried out at the Department of Animal Science, Faculty of Agriculture, University of Peradeniya. Proximate compositions of formulated feed and imported feed (i.e. Control) are shown in Table 1.

A formulated feed using locally available feed ingredients was compared with an imported feed which was used as the control according to CRD. Weight gain, total length, survival rate and water quality parameters were measured. Water quality was measured using a pH meter, conductivity meter and portable data logging spectrophotometer. The compositions of feeds were analyzed using proximate analysis (A.O.A.C., 1995). Data were statistically analyzed using the SAS computer package.

RESULTS AND DISCUSSION

A significant difference ($p < 0.05$) was observed between the two treatments for weight gain (Table 2). Higher weight gain was observed in fish fed with formulated feed. Two treatments for survival rate and water quality parameters were not significantly different ($p > 0.05$). The estimated total cost of production for 1 kg of formulated feed was found to be lesser than imported commercial feed.