Use of Hydrolyzed Poultry Feathers to Formulate a Low Cost Feed For Guppy (*Poecilia Reticulata*)

P.H.P. Prasanna[1], R.D.C.S.Ranadheera[1], E.B.R.W.S. Edirisinghe[2], U. Edirisinghe[2]

Guppy is one of the important ornamental fish species, which has a high demand in export market. High feed cost is a major problem in the ornamental fish industry. Therefore introduction of a balanced feed with low cost is important. Replacement of expensive fishmeal in commercial feed, with a cheaper source of protein has a potential to reduce the cost of production of fish feed. In Sri Lanka poultry feathers are widely available by product at a very low or no cost and rich in protein.

Fish feeds were prepared using hydrolyzed poultry feathers at 25%, 50%, 75% and 100% along with Soy flour, wheat flour, and cod liver oil and vitamin mineral pre mixture. Commercially available fish feed with 0% hydrolyzed poultry feather was the control. By using a palatability tests the feed containing 25% hydrolyzed poultry feathers were selected for further experiments. Two weeks old guppies of both sexes were randomly divided into the 6 groups (n=6). Fish were fed once a day *ad libitum* for four weeks.

Body weight, body length, condition factor of fish, temperature and pH of water were measured at weekly intervals. Data were analyzed using SAS computer system. There was no significant difference between fish feed containing 25% hydrolyzed poultry feathers and control on body weight, body length and condition factor of fish ($P<0.05$). The type of feed did not significantly affect the temperature and pH of water ($P<0.05$). Therefore the use of 25% hydrolyzed poultry feather in fish feed formulation is economically viable and environmental friendly.

Key words: **Fish feed, Poultry feathers, Guppy**

[1] Department of Agricultural Systems, Faculty of Agriculture, Rajarata University of Sri Lanka, Anuradhapura, Sri Lanka, *Fax* 025-2221610.

[2] Department of Animal Science, Faculty of Agriculture, University of Peradeniya, Peradeniya,