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Evaluation of potential use of *Moringa oleifera*l eaf meal as a partial replacement for fish meal in diets for Guppy (*Poecilia reticulata*)

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Moringa oleifera (Moringa) is a highly valued plant, distributed in many countries of the tropics and subtropics. Leaves of *M. oleifera* are a rich source of protein and the composition of amino acids in the leaf protein is well balanced. The present study was carried out to evaluate the potential use of *M. oleifera* leaf meal as a partial replacement for fish meal in diets for *Poecilia reticulata* fry. Four experimental diets were formulated by inclusion of *M. oleifera* leaf meal at levels of 0%, 5%, 10% and 15% in CD, 5MD, 10MD and 15MD diets respectively. Twenty one day old male *P. reticulata* (total length 2.28±0.01 cm and body weight 0.11±0.00 g) were randomly distributed into 12 experimental tanks at a stocking density of 10 fish per tank and fed on respective diets three times per day for 8 weeks. The food consumption (% BW/day), average daily gain (% ADG), specific growth rate (% SGR), survival rate, feed conversion ratio (FCR) and Hepatosomatic Index (HSI) of fish were analyzed. At the end of the experiment the results showed that fish fed on four different diets were similar to each other in total length (3.02±0.23-3.16±0.21 cm), body weight (0.30±0.08-0.35±.07 g), food consumption (9.28±1.75-10.30±2.34), % ADG (2.21±1.86-2.43±1.80), % SGR (1.82±1.41-2.00±1.29), % Survival (91.11±3.33-91.85±3.76), FCR (1.18±0.42- 1.86±0.46) and HSI (1.79±0.79-2.38±0.53).The present study showed that *M. oleifera* leaf meal can be used as a low cost ingredient to partially replace fish meal ingredient diets for *P. reticulata* up to 15% inclusion level without any significant reduction in growth.

Keywords: *Moringa oleifera*, *Poecilia reticulata*, protein replacement, growth performance, survival

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