

## **Growth performance and feed utilization of juvenile marble goby (*Oxyeleotris marmorata*) fed acidified diets**

### **ABSTRACT**

The present study was aimed at evaluating the growth performance and feed utilization of marble goby (*Oxyeleotris marmorata*) juveniles fed with the acidified diets (AD). In feeding trial I, five fish meal-based diets were prepared [control (pH 6.0), AD 5.3, 4.3, 3.2 and 2.5]. Each diet was fed to triplicate batches of wild-caught *O. marmorata* (19 fish/ tank; total length, TL = 4.72±0.46 cm) for 8 weeks. The control, AD 5.3, and AD 4.3 treatments were terminated at week 4, due to drastic decline in total feed intake (TFI=0–0.05 g) and weight loss (weight gain, WG = -15.3 to -16.9%) in the fish. The AD 3.2 and AD 2.5 treatments were continued until week 8. Fish fed with the AD 3.2 showed significantly higher ( $P < 0.05$ ) TFI (0.98 g) compared to those fed with the AD 2.5 (0.73 g) at the end of the trial. Feeding trial II was done to assess the long-term effects of AD for another 7 weeks. Thirty fish specimens were randomly selected from each of AD 3.2 and AD 2.5 treatments and stocked individually in 7 L aquaria to eliminate the territorial behaviour that was observed in the first trial. At the end of the experiment, fish fed AD 3.2 attained significantly higher ( $P < 0.05$ ) WG (34%) than those fed AD 2.5 (13%). However, the growth performance and feed utilization results of the present study were very poor compared to those fed the normal fishmeal-based diet as is evident from synthesis of data from the literature review. Feeding of acidified diets was, therefore, not recommended for an extended period (> 3 weeks). Nevertheless, based on the strong preference of the fish for AD, it is worth trying to develop a weaning protocol using these diets as the starter feed and then slowly replacing them with the normal diet.