

EFFECTS OF FEEDING LEVEL AND FREQUENCY ON GROWTH AND FOOD CONVERSION RATIO OF JUVENILE SILVER PERCH (*BIDYANUS BIDYANUS*)

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Silver perch (*Bidyanus bidyanus*) is a species of native freshwater fish that has been identified as having a potential for aquaculture (Rowland *et al.* 1995). Growth rate and efficiency of feed utilisation are important determinants of productivity in aquaculture systems. Our experiment examined the influence of level of feeding and frequency of feeding on the growth and food conversion ratio (FCR) of juvenile silver perch.

One hundred and eighty fish with a mean body weight of 1.3 ± 0.14 g were randomly allocated to 18, 70 L tanks (10 fish/tank). The aerated water in the tanks was saline (5 g/L). Water temperature was maintained in the range 24.9 - 26.2°C and the water in each tank was replaced every 7 days. The fish were fed a diet based on fishmeal, soybean meal, wheat and sorghum, that contained 35.6% crude protein (Allan and Rowland 1992). This diet was fed at either 5% or 10% of body weight and at feeding frequencies of 2, 4 or 6 times per day. The 6 treatments were replicated 3 times. The experiment was continued for 4 weeks. The fish were weighed every 7 days and feed input was measured.

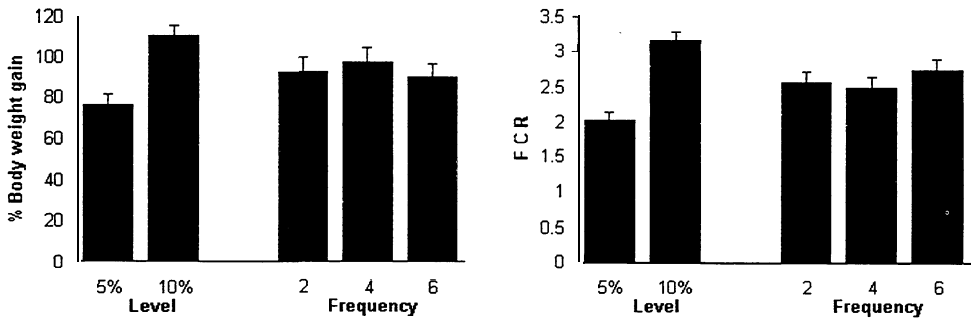


Figure 1. Percent body weight gain (gain in weight as a % of initial weight) and food conversion ratio (FCR; g food/g body weight gain) of juvenile *Bidyanus bidyanus* fed at 5% and 10% of body weight and at frequencies of 2, 4 and 6 times per day

The results (Figure 1) showed that the % weight gain and the FCR were both significantly higher ($P < 0.01$) for the fish fed at 10% compared to those fed at 5% of body weight. Frequency of feeding had no significant effect on either gain or FCR.

These results indicate that the feeding level required to obtain maximum growth rate of silver perch juveniles lies between 5% and 10% of their body weight; feeding at the 10% level resulted in an increase in FCR which suggests that this level exceeded their *ad libitum* intake and some food was wasted.

ALLAN, G.L. and ROWLAND, S.J. (1992) *Aust. Aqua.* 6: 39-40.

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