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RESEARCH REPORTS

Sustainable Aquaculture for a Secure Future

Title: Protein requirement in masculinized and non-masculinized juveniles of Bay Snook *Petenia splendida*

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The effect of the dietary protein level on growth and total body chemical composition of the native cichlid Bay snook (*Petenia splendida*), masculinized and non-masculinized, was studied. Five semi-purified diets with protein levels 35, 40, 45, 50 and 55% crude protein (CP) were formulated and evaluated by triplicate. Groups of 50 juveniles were each stocked in 70 L tanks and fed to apparent satiation for 42 days trial. At the end, weight gain (WG) (403.41%), body length (BL) (6.58 ± 0.10 cm) and specific growth rate (SRG) (1.67%/day) of the masculinized fish were obtained with the 45% CP diet, and they were significantly different ($p = 0.002$) from the other treatments. In the case of non-masculinized fish, the 45 and 55% CP treatments showed significant differences ($p = 0.00001$), with respect to other treatments, with a WG of 398 and 394%, SGR of 1.66 and 1.63%/day, protein productive value (PPV) of 28.91 and 29.21%, and feed conversion rate (FCR) of 1.23 and 1.08 respectively. Protein body composition for masculinized fish was different ($p = 0.0001$) only for fish fed 35% CP compared with fish at the beginning of the experiment. We conclude that the

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optimum protein requirement, estimated by the broken-line model for masculinized and non-masculinized P. splendida was 45 and 44.8% PC respectively.

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