Growth Rate of Canine Catfish Eel, *Plotosus canius* Hamilton-Buchanan at Three Different Stocking Densities

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Abstract

The study on growth rate of canine catfish eel reared with a commercial pellet feed freshwater catfish containing at least 40% protein was conducted at 3 different densities of 0.5, 0.75 and 1.0 fish/l with 3 replications. The initial size of specimens was averaged in weight about 1.4±0.2 g and length about 6.4±0.3 cm was stocked in the 300 liters fiberglass tank containing 200 litters of seawater. Feeding was given twice a day throughout 120 days of rearing and drain 50% water everyday. At the end of the experiment, fish had grown to the weight of 18.2±2.2, 16.6±3.8 and 12.6±2.1 g and the length of 15.0±0.6, 14.4±1.1 and 13.2±0.8 cm in each of 3 densities, in respectively. The growth of canine catfish eel by weight and length at densities 0.5 and 0.75 fish/l non-significantly different (P>0.05). The means of daily weight gain (DWG) of fish reared in the densities of 0.5 and 0.75 fish/l were 0.14±0.01 and 0.13±0.01 g/d showing a non-significantly different (P>0.05). But those were significantly different (P<0.05) from DWG found in the treatment reared with the density of 1 fish/l (0.09±0.03 g/d). The specific growth rate of fish reared in 3 densities of 2.14±0.07, 2.06±0.08 and 1.81±0.24 % per day were non-significantly different (P>0.05). A mean of survival rate of the treatment reared with density of 0.5 fish/l was highest and significantly different from the mean of that reared with the density of 1 fish/l. The results suggest that 0.75 fish/l is the optimum density to rear canine catfish eel. The results from multiple linear regression analysis was found that DWG is varied on fish density, feeding per fish per day, concentration of total ammonia and nitrite as the following equation: $\text{DWG} = 0.93 - 0.93 \times \text{Dens.} + 29.4 \times \text{FPFPD} + 1.34 \times \text{TAN} + 1.61 \times \text{NO}_2$

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