Determination of Optimum Stocking Density for Pearlspot (*Etroplus suratensis*) (Bloch. 1790) for Aquarium-Keeping

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In ornamental aquaculture, best stocking densities of a species for aquarium keeping is needed in order to maintain a better survival of aquarium fish. Pearlspot (*Etroplus suratensis*) is a popular food fish. Its' vibrant colors and similar shape to "discus" fish make them a formidable candidate for aquarium keeping, though no studies were done in this regard. The aim of this study was to estimate optimal stocking density for pearlspot in captive conditions. The effects of 3 stocking densities were evaluated on growth and survival during 50-day experimental period in captivity. The experiment had 3 stocking densities as: Low Stocking Density (LSD- 0.13 fish/L), Medium Stocking Density (MSD-0.16 fish/L) and High stocking density (HSD-0.2 fish/L) in triplicates. Adult fish (total length range from 8.11±0.35 cm to 11.8±0.67 cm) were stocked in experimental tanks (Length*Breadth*Height: 86*70*25 cm) and fed with a commercial diet containing 40% crude protein. Survival Rate (SR) and growth parameters such as body weight gain (BWG), body length gain (BLG), average daily weight gain (ADWG), average daily length gain (ADLG) and specific growth rate (SGR) were calculated during the experiment period. The experimental design was Complete Randomized Design. The result of BWG, ADWG and SGR were significantly different ($P< 0.05$) among treatments. The BLG and ADLG were not significantly different ($P<0.05$) among treatments. The Highest BWG was reported by fish raised at HSD (2.27±0.45 g) than MSD (1.64±0.64 g) and LSD (1.20±0.899 g). There were no mortalities found in any experimental tanks, hence, the survival rate for all the treatments was 100%. The result from this study revealed that the stocking density of 0.2 fish/L can be used as the optimum stocking density for rearing pearlspot in tanks under captivity and this can be further studied to introduce pearlspot as an aquarium fish.

Keywords: Aquarium fish, *Etroplus suratensis*, Growth, Stocking density, Survival

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