

Effect of stocking density and salinity on the growth and survival of golden *Anabas* fry

ABSTRACT

Stocking density and salinity influence on the growth and survival of golden *Anabas* fry were studied. Experiments were carried out at Hatchery Unit, Institute of Bioscience, Universiti Putra Malaysia, Serdang Selangor, Malaysia. Growth parameters were measured once a month. While survival was monitored daily throughout the experimental period. Water quality such as temperature, dissolved oxygen (DO), pH, ammonia and nitrite were measured once a week prior to water change. During the study period, fry were fed to apparent satiation with commercial crumble diet (Cargill 6103) containing 34% crude protein. After 6 weeks of culture, fry were weaned on Starfeed 9910 (1mm) containing 32% crude protein. Feedings were carried out two times daily at 0830 and 1700. In the stocking density experiment, 3 densities tested were 2, 3 and 4 fry/L. All treatments were conducted in triplicates in 10L plastic aquaria. Golden *Anabas* fry with wet weight of 1.02g weight and total length of 3.60cm were used in this experiment. As for salinity experiment, golden *Anabas* fry were cultured in water with salinities of 0, 5, 10 and 15 ppt, at stocking of 3 fry/L, in 8L aquaria. Statistical analysis showed that there were significant differences ($p < 0.05$) in the growth between the treatments. The best growth recorded was in 2 fry/L, followed by 3 and 4 fry/L. As for salinity experiment, 0 ppt showed significantly better ($p < 0.05$) growth as compared to the rest of the treatments. However, the percentage of survival was not significantly different ($p > 0.05$) among the treatments. In conclusion, golden *Anabas* fry showed better growth when cultured at low stocking density (2 fry/L) and can tolerate up to 15 ppt salinity.

Keyword: Stocking density; Salinity; Golden climbing perch; Growth; Survival