Effects of Shelter on Survival- and Growth Rate of Giant Freshwater Prawn (*Macrobrachium rosenbergii* de Man) During Post Larvae Stages

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Abstract

One of the major constraints in the culture of giant freshwater prawn (*Macrobrachium rosenbergii*) is the low survival rate during the post larvae phase due to cannibalism. The objective of this experiment was therefore to evaluate the effects of shelter on survival- and growth rate of post larvae. Experiments were carried out at the hatchery of the Bogor Extension Fisheries Programme, Bogor, Indonesia. Aquariae, each with a water volume of 100 litres, were stocked with post larvae (PL) of an average weight of 0.02 g at a density of one PL per litre. After acclimatisation, PL were fed with commercial pelleted feed of 1mm diameter. Five different shelter types were evaluated: multiple vertical shelter (B), single diagonal shelter (C), zigzag shelter (D), horizontal single shelter (E), and a combination of vertical and horizontal shelter (F). Each shelter type and a control without shelter (A) was tested in triplicate (18 aquaria) over a period of 60 days. Thereafter PL were counted and weighted again. Water quality parameters (temperature, pH, oxygen, nitrite, ammonia) were measured daily during the whole experimental period. The results of the experiments clearly showed that each type of shelter in comparison to the controls improved the survival rate significantly. The highest survival rate with 53 % was obtained by using a combination of vertical and horizontal shelter (treatment F). The final average weight of PL was also highest in treatment F (3.38g) and differed significantly from the weight observed in controls (2.87g). Results of these experiments should be also examined under pond conditions.

Keywords: Growth rate, post larvae, shelter, survival rate

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