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## Development of probiotics based culture system of *Macrobrachium rosenbergii* using different stocking densities

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Owing to the problem of antibiotic resistance and subsequent reluctance of using antibiotics, probiotics use in aquaculture is becoming popular day by day. One experimental design with 150 days culture period of *Macrobrachium rosenbergii* was conducted with 3 treatments maintaining stocking density of 02/m<sup>2</sup>, 03/m<sup>2</sup> and 04/m<sup>2</sup> in T1, T2 and T3 respectively. Each of the treatments was with 3 replicates where each replicate was segmented into two parts to separate probiotics and non-probiotics based culture system. The higher body weight of 63.7 g was recorded in lower SD of T1 in comparison to lower body weight of 55.7 g and 43.0 g in higher SD of T2 and T3 respectively for probiotics application segments. The average body weight of 55.7 g, 46.7 g and 37 g respectively were found for the same treatments in non-probiotics segments. The average survival rate of 69.3%, 62.7% and 58.3% were recorded in probiotics and 68.3%, 63% and 57.7% respectively in non-probiotics treatments. Average daily growth rate and gross production were found better in probiotics than that of non-probiotic segments in all the treatments. Average daily growth rate of T1 was found 0.41 g and 0.36 g respectively for probiotic and non-probiotic segments. Similarly for T2 and T3 average daily growth rate were found 0.35 g and 0.27 g for probiotics and 0.30 g, 0.23 g for non-probiotic segments respectively. Gross average production showed better result of 103 g/m<sup>2</sup>/crop in T2 probiotics treated segment than that of other two results of 87.23 g/m<sup>2</sup> and 98.10 g/m<sup>2</sup> in T1 and T3 treatments respectively whereas 74.62 g, 87.23 g and 84.26 g/m<sup>2</sup>/crop was recorded in T1, T2 and T3 respectively in non-probiotic treatments. Abiotic parameters in all segments of 3 treatments were within the optimum ranges for *M. rosenbergii* culture during the study period.

### Biography

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