Growth and survival of bilateral eyestalk ablated small male freshwater prawn Macrobrachium rosenbergii (DeMan)

ABSTRACT

The freshwater prawn Macrobrachium rosenbergii exhibits three male morphotypes: Blue Claw (BC) male, Orange Claw (OC) male and Small Male (SM). Effects of bilateral eyestalk ablation on growth and survival of SM freshwater prawn were determined in monosex culture. The SM juveniles (9 g) were used in treatment bilateral eyestalk ablation and control (intact/unablated) at a hatchery. Ablated prawns were stocked at 5 prawn m-2 for 80 days. At the end of the experimental period, the average weight increased from 8.96 ± 1.06 to 40.95 ± 4.01 g, with bilaterally ablated prawns attaining the greatest growth. The final body weight of prawn at harvest was 40.95 ± 4.01 g in bilateral ablated SM and 22.69 ± 2.41 g in unablated SM. The specific growth rate of bilaterally ablated prawns (1.90%) was significantly higher than unablated prawns (1.15%). The growth trend of SM prawn was increased significantly from the controls. The wet weight of ablated prawns doubled compared to the control but yield was not significantly different due to mortality. The survival of bilaterally ablated prawn was significantly low 50%. The potency of bilateral eyestalk ablation in enhancing growth rates may be limited due to high mortalities of ablated prawn.

Keyword: Bilateral eyestalk ablation; Freshwater prawn Macrobrachium rosenbergii; Growth; Survival