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Artemia NAUPLII INTAKE BY *Macrobrachium carcinus* AT DIFFERENT LARVAL STAGES IN LABORATORY

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Abstract

The *Artemia* nauplii intake by painted river prawn *Macrobrachium carcinus* was determined for larvae in stages III, IV, IX, X and XI of development, under laboratory conditions, aiming at optimizing feed management. The daily intake rate was determined for three supply densities of newly hatched *Artemia* nauplii (AN) (2, 4, 8 AN mL^{-1}), which were counted and placed in 10 Petri dishes of 20 mL (repetitions), kept on black background. One larva of each developmental stage was added to each plate. After 24 hours, the remaining intact nauplii were counted. In general, the larvae average intake increased significantly ($p<0.05$) as nauplii density increased. Larvae in stage XI consumed significantly less nauplii ($p<0.05$), independent of density. The percentage of intake of *Artemia*, regardless of nauplii density was lower in stage XI (36.8%), indicating lowest nauplii capture efficiency. Larvae in the initial developmental stages seem to have greater need for live food, unlike the final stages, which seem to necessitate addition of inert food to the diet. While the live food supplied at insufficient density can lead to larval malnutrition, resulting in reduced growth rate and cannibalism. The AN excess can result in problems with water quality and an increase in cost of production. Results obtained provide guidance for development of a dietary protocol technically and economically more efficient.

Keywords: hatchery; feeding behavior; painted river prawn; live food.