

Effect of a prebiotic on *Macrobrachium rosenbergii* (De Man, 1879) larvae growth and survival

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New products (e.g. prebiotics) are constantly being developed to maximize production, particularly at the hatchery level to improve fry or post-larvae (PL) quality. Gutacean™, is a novel product, which has not been tested in fresh water species since it requires some salinity to be able to have a positive effect on survival and growth. Hence, we investigated the effectiveness of Gutacean™ in a brackish water media on the growth performance of the giant freshwater prawn *Macrobrachium rosenbergii* larvae, which requires brackish water during early development. Approximately 8,000 *M. rosenbergii* larvae (stage III) were treated with 200 µl Gutacean™ for an hour in 40 L of brackish water (12.0 ± 0.5 ppt). Afterwards, 6,000 treated larvae were individually counted in three groups of 2,000 (treatment in triplicates), along with 6,000 untreated larvae (control in triplicates), which were subjected to an identical handling procedure as the treated ones, and stocked (100 larvae /L) randomly in six hatching containers filled with 20 L of clear brackish water (50% water exchange per day), fitted with temperature controllers (28.0 ± 0.5 °C). Initial and final weights, shedding frequency and survival were recorded after 30 d, when the larvae reached the PL stage. Water quality parameters were maintained within ideal ranges. A significant difference ($P>0.05$) in survival rates of the treated (38.4%) vs. the control PLs (31.6%) could be observed, contrasting, with no significant difference ($P<0.05$) in final weights, nor in the final shedding frequency, among the treated and untreated (control) PLs. Further investigations are needed since the results in this study were mixed, perhaps by using other salinity levels.

Biography

William N. Camargo completed his PhD (2007) and M.Sc (1997) from Ghent University (Belgium), a specialization in Mariculture from the Naikai Sea Farming Center, Japan (1991), and a B.S. in Biology/Aquaculture (1988) from Florida-Tech (USA). He was a Senior Lecturer in Aquaculture, University of the South Pacific, Republic of Fiji and has conducted research in the areas of water quality, biogeography, molecular genetics, larviculture food production, digestibility and feed intake of alternative protein sources, probiotics, aquatic organisms' diseases and ecology. Has published over thirty publications in reputed journals and refereed for several prestigious journals and organizations.

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