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**EFFECT OF DIETARY β -GLUCAN ON THE GROWTH
PERFORMANCE OF FRESHWATER PRAWNS,
*Macrobrachium rosenbergii***

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β -glucans are naturally occurring linear unbranched homopolysaccharides that contain only glucose, linked by glycosidic bonds, as structural components. Dietary β -glucan is found to enhance the growth and immunity of many animal species including a number of aquatic species. Giant freshwater prawn (*Macrobrachium rosenbergii*) culture has been developing rapidly over the last few years in Sri Lanka. One of the major constraints facing this industry is lack of a balanced commercial feed to obtain optimal body size in commercial culture systems. In this regard, β -glucan can be used as a growth promoter in freshwater prawn feed. However, up to now, there have been no studies on the use of β -glucan as a growth promoter in freshwater prawn farming. Thus, the present study was conducted to investigate the effect of dietary β -glucan derived from yeast on the growth performance of freshwater prawns.

Five different experimental feeds were prepared using supplements with different percentages of β -glucan (0, 0.1, 0.3, 0.5, 1% w/w). All five types of feed had the same composition except for the percentage of β -glucan. Feeding trials were conducted in duplicate in ten different fibre-glass tanks. Thirty post-larvae of *M. rosenbergii* with an initial body length of 9.0 mm were allocated to each treatment and fed with experimental feed twice a day for 19 weeks. The total body length of 26% prawns in each tank was measured at 5, 10, 15 and 19 weeks to calculate the growth rate. Statistical analysis showed that dietary β -glucan significantly ($P < 0.05$) increased the growth rate of giant freshwater prawns. The highest growth rate was achieved with 1% β -glucan. Further, the body length of prawns fed 1% β -glucan had a significant relationship ($P < 0.05$) with the age of prawns.

The present study concludes that dietary β -glucan significantly enhances the growth of fresh water prawns.

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