



## AII 06 Evaluation of the production quality of giant fresh water prawn, *Macrobrachium rosenbergii* sampled from different aquaculture farms in Hambantota District- Sri Lanka

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We evaluate the quality (in terms of proximate composition and morphometry of prawn) of *Macrobrachium rosenbergii*, giant fresh water prawns cultured in three aquaculture farms in: Marakolliya pond (MP), Netolpitiya pond (NP) and Angunawewa pond (AP) in Hambantota district. These farms used *M. rosenbergii* post-larva produced by freshwater prawn hatchery at Kahandamodara to stock their ponds and the grow-out period of each aquaculture pond was 5-6 months. Water samples were taken fortnightly to determine the Dissolve Oxygen, salinity, hardness and total alkalinity while onset measurements were taken for the temperature, pH and secchi depth/turbidity. Ten adult prawns, comprise with five males and five females were randomly collected from each pond, at the harvest to determine the Morphometric (Total length (TL), Carapace length (CL), Rostrum length (RL), Total Weight (TW) etc. parameters of prawns. The chemical composition of the diets and muscle samples of prawns (moisture, lipid, ash & protein) were determined. Salinity & the hardness of water in the pond of site MP ( $4.96 \pm 0.43$  ppt,  $1497.3 \pm 705.06$  ppm) was significantly greater than those of site NP ( $1.57 \pm 0.42$  ppt,  $636.95 \pm 69.95$  ppm) & AP ( $0.33 \pm 0.16$  ppt,  $189.5 \pm 36.31$  ppm) while DO, total alkalinity, temperature, pH & turbidity were not significantly different among sites (oneway ANOVA). The feeds used in Site AP had higher protein (27.84%), lipid (15.4%) and ash (14.2%) contents compared to the feeds used in other two sites. Prawns sampled from site AP (TL-  $19.70 \pm 2.05$  cm & TW-  $64.79 \pm 11.76$  g) and site MP (TL-  $19.61 \pm 1.91$  cm & TW-  $65.43 \pm 11.47$  g) were significantly larger than prawns sampled from site NP (TL-  $15.97 \pm 3.52$  cm & TW-  $50.94 \pm 16.09$  g) ( $P < 0.05$ ). Only at the site MP which males ( $75.68 \pm 4.75$  g) exhibit significantly greater TW compared to the females ( $55.18 \pm 3.26$  g). Moisture, ash and lipid contents of the edible muscle portion of the sampled prawns were similar in three sites while site AP had higher protein content (76.28%) compared to the samples collected from site MP (74.5%) and NP (74.7%).

**Keywords:** *Macrobrachium rosenbergii*, water quality, feed quality, proximate composition