

**DEVELOPMENT OF A SHRIMP GROW OUT FEED USING LOCALLY
AVAILABLE INGREDIENTS AND EVALUATION OF THE PRODUCTION
PERFORMANCE OF THE SHRIMP, *PENAEUS MONODON* UNDER THE
DEVELOPED FEED**

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Abstract

It is important to develop shrimp feed formulations that are appropriate to that needs and prevailing shrimp culture practices in Sri Lanka. During the present study a shrimp feed was formulated replacing costly imported fish meal with locally processed fish silage plus shrimp head meal and it was compared with a commercially available imported shrimp feed. The crude protein percentage of the feed formulated was 38 ± 0.57 while that of the commercial feed was 40 ± 0.82 which were not significantly different from each other ($P > 0.05$). The protein level of the feed formulated, which is the most important nutritional factor of a shrimp feed, was suitable for semi – intensive grow out systems of the shrimp, *Penaeus monodon* while other nutrients were also available in required ranges.

Growth performances evaluated by mean body weight, specific growth rate and weight gain of *Penaeus monodon* grown under the feed formulated were not significantly different from the respective values recorded for the shrimp grown under the commercial feed. Percentage survival, food conversion ratio and the yield at the 100 days of production cycle recorded for the shrimp fed with the feed formulated and for the shrimp fed with the commercial feed were $78\% \pm 1.57$, $80\% \pm 1.25$; 1.85 ± 0.25 , 1.6 ± 0.87 ; $1803 \text{ Kg/ha} \pm 0.95$, $1944 \text{ Kg/ha} \pm 1.23$ respectively which were not significantly different from respective values ($P > 0.05$). The feed formulated during this study could be improved further by employing cooker extrusion method in pelleting and could be recommended for Sri Lankan semi-intensive shrimp grow out systems.