



## DEVELOPMENT OF FEED FOR BLUE SWIMMER CRAB, *PORTUNUS PELAGICUS* TO REDUCE THE DEPENDENCY ON FRESH FEEDS FOR SUSTAINABLE MARICULTURE

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### Abstract

Fish farmers feed the blue swimmer crabs using fresh feeds such as low value fishes, trimmed squid offal, clam and oyster meat. The availability, cost, nutritive profile of these fresh feeds fluctuates every now and then. Further, these fresh feeds usually deteriorate the water quality on continual feeding which may cause disease problems and mortality. Therefore, an attempt has been taken to develop a formulated feed to evaluate its acceptance and performance in blue swimmer crabs. A total of 36 numbers of male and female *P. pelagicus* with the average weight of  $100 \pm 20$  g were distributed in 4 different treatments such as feeding with fresh feed (T1), feeding dry diet (T2), feeding semi moist diet (T3), combination of fresh and semi moist diet (T4) each with 3 replicates. The experiment was conducted in indigenous re-circulatory aquaculture systems (iRAS) connected to 2 numbers of FRP tanks contains 12 compartments of  $40 \times 50 \times 40$  cm in each tank. There were two practical diets prepared with the crude protein and lipid levels of 40% and 8%, respectively. The experiment was conducted for 90 days. The result revealed that there was significant difference in growth parameters such as weight gain percentage (WG%), specific growth rate (SGR), average daily growth (ADG) and feed conversion ratio (FCR) among the different treatments in both males and females ( $P < 0.05$ ). The highest WG%, SGR and ADG was noticed in T1 group and least values were observed in T3 group. Male crabs showed higher ADG, WG% and SGR than female crabs. Better FCR was noticed in dry diet fed groups in both male and females. The results of this research work will pave a path for sustainable culture of blue swimmer crabs using dry pellet feeds and reduce the dependency for fresh feeds and thus environmental pollution.

**Key words:** Blue swimmer crab, clam meat, fresh feed, formulated feed, semi-moist diet