

# **Brood Stock Management of Asian Seabass (*Lates calcarifer*, Bloch)**

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## **Abstract**

Aquaculture industry in Sri Lanka lacks the diversity of culture species. Although, there are 36 edible brackish water fishes in Sri Lanka, only one species, *Penaeus monodon* (black tiger prawn) is being used for commercial aquaculture. Increase in diversity of culture species depends largely on the availability and consistent supply of fish/shrimp seeds. The hatchery technology developed elsewhere for marine finfish, such as sea bass with an export potential need to be modified to local conditions with special attention of increasing the larval and post-larval survival rates and testing them in crop rotation with shrimp aquaculture. Hence seed production technology of important fish species for both domestic and export production indeed to be promoted.

The present study was undertaken to acclimatize wild brooders of seabass (*Lates calcarifer*, Bloch), collection from different locations into farming conditions and to define the most appropriate feeding strategies to maintain the brood stocks. This experiment was carried out with three brood stock groups (young, intermediate and old) in three different times. Young group of 08 sea bass ( $344.6 \pm 29.87$  g in weight, and  $36.0 \pm 13.7$  cm in length), intermediate group (06 fishes:  $3.75 \pm 1.29$  Kg in weight, and  $56.12 \pm 2.84$  cm in length) and old group (08 fishes:  $4.54 \pm 0.59$  Kg in weight, and  $63.12 \pm 3.84$  cm in length) were reared in 5 m<sup>3</sup> round fiber tank, 2 m<sup>3</sup> cement tanks (6 no's) and floating net cage 2x2x1.5 m<sup>3</sup> (2 no's) respectively. They were fed *ad libitum* a natural diet (live milkfish, sardines and live shrimps) and maintained under natural conditions of light and temperature. After 6 month reared period, the maximum survival rate (62.5%), and egg diameter 225  $\mu$ m were reported from cage-reared fishes. Results obtained from the rest of two groups were not significant ( $P > 0.05$ ) but the higher condition factor, 17.0 was found from the younger group reared in fiber tanks. Although these 3 trials cannot be comparable, none of fish hasn't attained in sexual maturity during the experimental period.

Past studies revealed that the maturity of sea bass and survival of adults are greatly affected by the level of energy-yielding nutrients in broodstock diets. Therefore, further studies needs for effects of brood stock nutrition on reproductive performance and egg quality of sea bass.