A PRELIMINARY STUDY ON THE POTENTIAL OF UTILIZING MANGROVE AREAS FOR FATTENING THE MUD CRAB, *Scylla serrata* (FORSKAL)

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Abstract

Crab fattening is essentially a holding operation during which post-moult or water crabs are kept for a short period of 20 days until they 'flesh out'. Mud crab, *Scylla serrata* (Forskal) which has high demand in the market was used for this study. Study was conducted at Irakakandy lagoon in Trincomalee district. Objectives of this study were to develop technology for fattening mud crabs in mangrove areas using low cost methods and to transfer the developed technology to the fishing community for sustainable utilization of mangrove areas for livelihood. Water and soil quality parameters, detritus were measured and recorded. Two cycles of fattening was done separately using same mangrove pens; with feeding and without feeding. Crabs were stocked at three stocking densities as 1 kg per m^2, 2 kg per m^2 and 3 kg per m^2 in triplicate.

Nine pens were constructed with plastic coated wire mesh (2 m × 2 m) with wooden support. The water crabs (250 g -500 g) were introduced to pens and were allowed to be fed on natural feed which were available in mangrove eco system during first cycle. Then the second experiment was done as same as first experiment while providing feed at 10 % body weight. Finally the meat crabs were harvested. Body weight, carapace length, sex, number of crabs, was recorded on first, seventh, and fourteenth days of fattening. All data were analyzed by using Excel Data Analysis tool and Minitab 16. The best stocking density was determined for both cycle of crab fattening.

According to the results high mortality occurred during the crab fattening without feeding, anyhow the first treatment was the best stocking density for that cycle which yield profit, but during the second cycle of crab fattening with feeding all the treatments yielded profit meanwhile the treatment 1 was best stocking density because that yielded highest weight gain, survival rate and highest rate of profit.