

**Survival and Growth of the Sea Cucumber *Holothuria scabra* (Jaeger)
Juveniles Reared at Different Diets**

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ABSTRACT

Sea cucumbers are economically important species, with high demand in local and international markets. Overharvesting due to this high demand causes depletion of wild populations of sea cucumbers. Stock enhancement has been resorted to improve the status of natural populations. This will need the development of rearing technology which includes studies on the effects of different diets on sea cucumber juveniles. In this study, the effects of five diets on growth and survival of sea cucumber *Holothuria scabra* juveniles were compared. The five treatments used were benthic diatoms (*Navicula* sp.) alone, combination of benthic diatoms and seaweed (*Sargassum* sp.) extract, seagrass extract alone, combination of benthic diatoms and seagrass (*Thalassia* sp.) extract, and commercial shrimp feed. Three replicates were used for each treatment. For every replicate, 10 juveniles with body length 1-2 mm were reared in a 3-L culture container with seawater and no sand substrate. Salinity ranged from 32-35 ppt and the temperature from 26-29°C. It was observed that there was a trend of increasing body weight, body length and body width of juveniles as weeks of culture progressed. After 7 weeks of culture, best weight gain, increase in body length and body width was achieved in juveniles fed with either benthic diatoms alone or combination diet of benthic diatoms and seaweed extract. There was high survival in all feeding treatments except in *H. scabra* juveniles fed with commercial shrimp feed. The lowest body weight, length and width and lowest survival were consistently obtained from juveniles given commercial shrimp feed.