

Post-larval Rearing Strategies in Sandfish (*Holothuria scabra*) Culture

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Abstract

Various post-larval rearing methods were compared to determine which scheme would give the most yield of newly settled (visible) juvenile stage (> 1mm body length). Five types of post-larval rearing methods were tested: T1- planktonic diatom only (*Chaetoceros calcitrans*, *Cc*), T2-benthic diatom *Navicula* (*Nsp*) as biofilm and concentrate, T3- *Navicula* as biofilm + *Cc*, T4- *Spirulina* as paste on settling plate + *Cc*, and T5- *Spirulina* (*Sp*) as paste on settling plates + *Nsp* concentrate. An experiment was conducted in small (3-li) aquaria using a cohort of Day 14 (post-fertilization) sandfish larvae. Simultaneously, three of the 5 post-larval rearing methods (i.e. T2, T3 and T4) were done in medium scale (30-li) aquaria to determine how a conventional method (T2) employed in a pilot sea cucumber hatchery in Central Philippines compared with method observed in Viet Nam (T3) or with a hybrid method (T4). Visible post-settled juveniles were counted weekly for the next three weeks and expressed as percentage yield. After three days of rearing, transparent but visible early settled juveniles were observed. Mean percentage (%) juvenile yield in week 1 was highest in T1 (*Cc* only)(17% + 1.3) followed by T3 (*Sp* + *Cc*) (14% + 1.6) in a 3 li scale. Yield increased and peaked in week 2 especially for rearing methods with *Nsp* while those without (e.g T1 and T2) declined dramatically by week 3. In the 30-li scale, the highest mean yield was consistent with T5 (*Nsp* + *Cc*) until Week 3 (12% + 11.2). The mean juvenile yield on the 2nd and 3rd week were better than the 2% average for this stage or the 2.5% “benchmark” based on experiences in the Philippines and Viet Nam as indicated in published references.

Keywords: post-larval rearing methods, sea cucumber