

Egg and larval development of induced spawned Sandfish (*Holothuria scabra*) in hatchery

Abstract

Holothuria scabra, commonly known as sandfish has a high market demand, especially in South East Asian countries such as Malaysia, Philippines and Vietnam. This species that is very popular among the Chinese is served as luxorius delicacy because it has high protein and medicinal properties. The increasing demand for sandfish has led to the over-exploitation worldwide. Hatchery production enables continuous seed production of *H. scabra* throughout the year by artificial spawning. Fifty healthy broodstocks collected from Kampung Baru-Baru, Tuaran Sabah (6° 18' 18.1656" N, 116° 17'43.1052" E) were acclimatized in Universiti Malaysia Sabah (UMS) hatchery for 2 weeks prior to spawning induction. The broodstocks were fed twice a day with ground *Sargassum* sp. and *Enhalus* sp. The combination of 3 spawning induction methods: thermal shock, desiccation and algal bath were applied. Total fertilized eggs obtained were approximately 700,000, with a 9 % hatching rate. The larval rearing was carried out in high density polyethylene (HDPE) tank filled with filtered and UV treated seawater (29-30°C). The larvae were fed twice daily with *Nannochloropsis* sp. at a specific feeding rate. The egg and larval development were recorded daily. The duration for each stages of larval development was as followed: Gastrula (24 hours after fertilization), Early auricularia (Day 2), Mid auricularia (Day 4), Late auricularia (Day 6), Early doliolaria (Day 21), Late doliolaria (Day 24), Pentactula (Day 26).