

Sandfish hatchery is developed by SEAFDEC

by Dr. Joebert Toledo, Chief of Aquaculture Department,
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At the price of US\$180 to 250 per kilogram of dried sea cucumber in the United States, sea cucumber are good bets for fish farmers in the region wanting to find the new “gold” in aquaculture.

This has driven SEAFDEC and its Aquaculture Department (AQD) in the Philippines to develop the hatchery, nursery and grow-out technologies of the sea cucumber *Holothuria scabra* so that overexploitation of the wild fisheries on which the sea cucumber trade depends will cease or be minimized. Aquaculture can take the pressure off wild stock, enabling it to recover and allowing sustainable management plans to be put in place by local government units and people’s organizations in sea cucumber-rich areas.

New sandfish hatchery built and inaugurated

Just recently, SEAFDEC built and inaugurated on 28 April 2010 a new sea cucumber hatchery in AQD’s main station in Tigbauan, Iloilo. The hatchery can produce as many as 0.2 to 0.5 million sea cucumber juveniles in a 45-day cycle from its ten 3-ton larval rearing tanks and four 8-ton nursery tanks. The hatchery has about 100 sea cucumber broodstock at present.

Attending the new hatchery inauguration are the partner-institutions of SEAFDEC in developing science-based sea



A new sea cucumber hatchery in AQD’s main station in Tigbauan, Iloilo



The partner-institutions of SEAFDEC in developing science-based sea cucumber technologies

cucumber technologies, such as the Research Institute for Aquaculture No. 3 (RIA-3) of Vietnam, the Australian Center for International Agricultural Research (ACIAR) through the Malaysia-based WorldFish Center (WFC), Japan International Research Center for Agricultural Sciences (JIRCAS), and the University of the Philippines Visayas. RIA-3 helped design the SEAFDEC sea cucumber hatchery while ACIAR/WFC and JIRCAS, along with the Government of Japan Trust Fund, are funding studies on sea cucumber. The Philippine Department of Science and Technology (DOST) has likewise been instrumental in technology development.

Dr. Joebert Toledo, AQD Chief, noted that next to Indonesia, the Philippines is the second largest exporter of dried sea cucumber in the world. In 2006, the country’s export of sea cucumber totaled 3,532 metric tons valued at US\$ 4.6 million. Sea cucumber, also known as



Holothuria scabra

sandfish or beche-de-mer, live on the seabed, look like slugs, are considered delicacies (*i.e.*, aphrodisiacs), and are common ingredients in Chinese medicine.

Dr. Toledo further noted that profit-making for fisherfolk and aquaculturists is not the sole motivation in putting up the hatchery. Sea cucumber are also potential bioremediators in multi-trophic or polyculture systems as they apparently can subsist on or take in uneaten feeds and feces coming from cultured fish. At AQD, this concept is being tested in black tiger shrimp ponds, and in milkfish and abalone culture. In the latter, sea cucumber are placed under the sea cages to deal with



The second hatchery harvests

A second harvest soon followed, this time with 1,500 pieces of juveniles sized 0.5-2.0 inches. This batch was stocked in the wastewater treatment tank (as bioremediator) of one of AQD's hatcheries and/or used by researchers in nursery rearing studies in hapa nets to improve culture technology.

Training and information dissemination

AQD is also organizing its first training course on sandfish in October 2010. For more details, email: aqdchief@seafdec.org.ph. SEAFDEC has also published a new extension manual, "Seed production of sandfish (*Holothuria scabra*) in Vietnam" which was written by Mr. Nguyen Dinh Quang Duy of RIA-3. The manual is a joint effort of AQD, Government of Japan Trust Fund, RIA-3, and WorldFish Center.



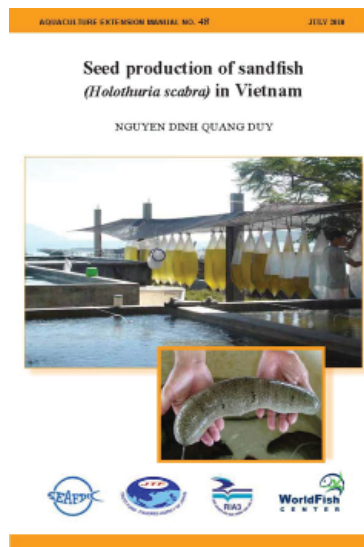
Researchers in nursery rearing studies in hapa nets to improve culture technology.

the waste. This is in line with the concept and enforcement of good management practices in aquaculture for environment protection by SEAFDEC and its member-countries.

Dr. Toledo also appealed to interested partners and collaborators in the region to put more funds in aquaculture research and development because aquaculture is still the best strategy to put food on the tables of poor families in rural areas and to manage local aquatic resources sustainably. Coastal communities and local governments for instance can communally-manage sea ranching and stock release programs for such a valuable commodity as sea cucumber.

First and second hatchery harvests

More than a month after SEAFDEC inaugurated its sandfish hatchery, the first harvest of almost 16,000 juveniles with average size of 4 mm was done. These were transferred to nursery tanks, later to be grown in net cages.



*New publication on "Seed production of sandfish (*Holothuria scabra*) in Vietnam"*