Improving giant clam farming in the Marshall Islands

The farming of giant clams is an aquaculture activity that was developed in the Marshall Islands more than 30 years ago, with relatively successful results. Despite the long history of giant clam farming, there is still much to learn about and improve on in order to reach a production that is efficient, viable and sustainable.

Spawning induction of giant clam brooders, using thermal stress. (images: R. Garcia-Gomez, SPC)

Giant clam juveniles have been used in the Marshall Islands for restocking and stock enhancement programmes, and for ornamental export markets in the United States and Europe.

For this reason, the Marshall Islands Marine Resources Authority (MIMRA) formally requested the Pacific Community (SPC), on behalf of the government of the Republic of Marshall Islands, to conduct an in-country training course for MIMRA staff and national private giant clam farmers on giant clam larval culture, nursery and grow-out systems.

In order to respond to this official request, SPC's Aquaculture Section, under the New Zealand-funded project 'Sustainable Pacific aquaculture development for food security and economic growth', engaged a regional expert on giant clam farming, Cletus Oengpepa from Solomon Islands, to provide technical training.

A practical and theoretical training on giant clam farming, including broodstock management, larvae rearing, hatchery and nursery techniques and grow-out protocols was conducted at the government hatchery in Majuro, from 16 to 27 July 2018. Participants comprised government fisheries officers and private hatchery operators.

The training specifically addressed the need to broaden the skills and knowledge of the staff working in the government-operated hatcheries or private enterprises.

Some innovative practises were taught to the participants, such as supplementary feeding of larvae, culture and use of microalgae, establishment of settlement structures, egg counting, fertilisation, and others. Special attention was given to the control of water quality parameters and how these affect breeding and larvae rearing results.

The expert also provided technical advice for a possible extension of the government giant clam hatchery, which could be built in 2019 if national funds are available.

The training was well received by participants, as shown by the post-training evaluations. As one of the first results of the training, MIMRA and the private hatcheries have begun to use concentrated microalgae bases to supplement the feeding of giant clam larvae, as well as to cover the settlement structures.

Close monitoring will be conducted by MIMRA, in close collaboration with the SPC Aquaculture Section team, to assess the real impact of the training and the implementation of the aforementioned innovative practises provided.

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