

## A Marshall Islands' successful aquaculture venture

*Numerous attempts to develop the aquaculture sector in the region of Micronesia, including in the Republic of the Marshall Islands (RMI), have been relatively unsuccessful in most cases; thereby it is quite encouraging that after all these aquaculture failures the Mayor of Rongelap, James Matayoshi, has even considered starting a fish farming operation in Majuro.*



Moi specimens ready for the market (image: J. Matayoshi)

The Rongelap Atoll Local Government (RALGOV) company, managed by Mayor Matayoshi, has been farming black-lip pearl oysters for many years now. In late 2012, the company decided to go into a marine finfish farming pilot project for the production of Pacific threadfin (*Polydactylus sexfilis*) – better known in the region as ‘moi’ – which is a fish of high commercial value and in high demand in Hawaii.

During the initial steps of the pilot project, Hawaiian fish distributors, researchers and scientists from various agencies and companies showed a strong interest in this venture, which resulted in significant technical assistance being offered to the Marshallese entrepreneurs. As an example, scientists from the Oceanic Institute of Hawaii Pacific University provided technical support in order to fine-tune a fishmeal mix that included products that are locally available in RMI.

The first spawning exercises were implemented at the College of the Marshall Islands in 2012 and early 2013. A survival rate of 17% was achieved. Moi fingerlings were then stocked into small marine floating cages for grow-out for a period of around six months, after which they were harvested. Survival and growth rates obtained during these

first farming attempts were evaluated and promised to be enough to pursue the venture.

The company decided to build its own hatchery (the Aquaculture Technologies of the Marshall Islands (ATMI) hatchery), which was to be located in Majuro. The hatchery construction was completed in May 2013, and large marine floating cages were deployed to provide enough space for the new batches of moi fingerlings.

These cages have now been placed on the north shore of Majuro Atoll, next to a small island known as Drirej, which has become the grow-out base for moi farming.

More than 80,000 moi fingerlings were produced at the hatchery in 2015. After around six months of grow-out in cages, moi that were of a commercial size were exported to Hawaii, and obtained quite promising prices and triggered a very high demand for the product.

According to Mayor Matayoshi: ‘In 2016 the company has exceeded USD 100,000 in sales as a start-up company. The hatchery production has exceeded the volume available in our sea-cages. This is why we are now installing an additional six sea-cages, as we are expanding into full commercial phases.



A) Moi fry produced at the hatchery; B) Transfer of moi fingerling from the hatchery to the nursery; C) Floating cage for grow-out; D) Harvest of moi specimens at the floating cages; and E) Pellets produced locally as feed for moi (all images: J. Matayoshi).

Our goal is to produce about 50,000–60,000 fish per month to supply the markets in Hawaii, Marshall Islands, and maybe Micronesia and Asia in the near future. High quality feed production is one of the key aspects to be developed.’

This aquaculture business is also getting a boost from the government’s utility company, which has installed electricity cables for the first time into the small island of Drirej on the north shore of Majuro, where the new marine floating cages are located. The manager, Mayor James Matayoshi, is expecting to create new job opportunities in the area and he will provide technical training to local fishers and agriculture farmers who are interested in getting involved in what would be a new business for them: aquaculture farming.

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It is hoped that the very encouraging first results of the Marshallese moi farm will be validated when the farm reaches its full-commercial phases. A positive future would not be surprising, considering the number of boxes the project has ticked in the list of pre-requisites for successful aquaculture ventures, including the following:

- The leadership of an enthusiastic entrepreneur, who already had a sound knowledge of aquaculture and the marketing of aquaculture products;
- Access to clean waters and a healthy environment;
- A sound technical and scientific basis, especially in the first experimental phase, thanks to the support of the College of the Marshall Islands and the Oceanic Institute of Hawaii Pacific University;
- The choice of a local species, which requires relatively simple farming techniques;
- The assistance of local authorities for the infrastructure (e.g. electricity and water supply);
- Access to locally-made aquafeeds; and last but certainly not least
- A product in high demand from an accessible market that is ready to pay premium prices for premium quality.

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