

Aquatech Oceania owns expertise in hatchery and grow-out system design, staff training and commercial production for pearl oysters (*P. maxima*, *P. margaritifera*, *P. fucata* and *Pteria penguin*) and decapod crustaceans (prawns, crabs and spiny lobsters).

We emphasise our commitment to sustainable resource development and environmental awareness in business practices. We do not use any anti-fungal chemicals nor antibiotics for controlling water quality, but we adopt careful hatchery system management through continual technical improvement.

## Acknowledgement

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# Major success for TMRC blacklip pearl oyster hatchery, Penrhyn Atoll, Northern Cook Islands

by Dr Rick Braley

During mid-1997 the Tongareva Marine Research Centre hatchery had achieved its goal of successfully mass producing blacklip pearl oyster (*Pinctada margaritifera*) spat. An Asian Development Bank project, the Outer Islands Marine Resources Management Training Project, which started in July 1996, substantially modified the existing hatchery and algal lab (original infrastructure resulting from the USAID project, 1991–1995) and continued with in-house training of staff. New seawater systems were constructed, one from the ocean-side of the atoll for the hatchery and one from the lagoon for the land nursery culture of spat. New reservoir and culture tanks were obtained, the flow-through system of larval culture was used and a specific protocol developed for TMRC on hygiene, feeding, and algal production.

The first substantial spat settlement was about 30 000. This was followed by what is perhaps a world record batch of 250 000 spat [estimate in August 1997 by the senior hatchery technician, Mataora Bill Marsters] for this species. After about

60 days the spat were transferred from the settlement tanks to land nursery raceways where they receive subsand-intake filtered lagoon seawater and are fed mass microalgae produced under the capable direction of senior algal technician Lolongi Taime.

A third batch of spat was earlier estimated to be >100 000 but in early November 1997 volumetric count estimates of spat on sides and bottom of tanks were about 200 000, while those on collectors (black boxes and PVC slats as described in *Pearl Oyster Information Bulletin # 10*, pp. 12–14) were estimated to be about 100 000.

Spat are being placed in the lagoon nursery in trays. An indication of growth rates and survival of small spat [caught on 3.6 mm mesh versus those on 6 mm mesh] placed out in trays after 1 month was: 3.6 mm grade: mean 120% shell DVM increase and mean 55% survival; 6 mm grade: mean 60% shell DVM increase and mean 60% survival. Improved trays and regular checks and cleaning should improve survival rates.

