AFSSRNews

Editorial

The Asian Fisheries Social Science Research Network (AFSSRN), supported by the International Development Research Centre of Canada, officially ended as a project on 31 March 1996. At an AFSSRN team members meeting in late March in Bali, Indonesia, it was agreed that the AFSSRN should continue as an independent organization. Dr. Kuperan Viswanathan of the Department of Natural Resource Economics of Universiti Pertanian Malaysia offered to work with Dr. Pomeroy to reorganize the AFSSRN. A constitution has been prepared describing objectives and administrative arrangements for the AFSSRN. Membership in the AFSSRN will no longer be confined to the original 14 member institutions in Thailand, Malaysia, Indonesia, the Philippines, and Vietnam, but will be open to any Asian Fisheries Society member with interests in social science research in fisheries aquaculture and coastal resources. At present, Dr. Kuperan will serve as Chair of the AFSSRN and Dr. Pomeroy will serve as Vice Chair. A formal election for officers will be held at the next Asian Fisheries Forum. Planned activities include an annual workshop/training, a website, a news group for information exchange, continuation of AFSSRNews in *Naga*, and special sessions at the Asian Fisheries Forum. It is expected that ICLARM will continue to support the AFSSRN. We encourage all social scientists in Asia to become members of the Asian Fisheries Society and the AFSSRN.

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R.S. Pomeroy

Clam Farming in the Mekong Delta, Vietnam

T.Q. Phu

The Mekong Delta region in southern Vietnam has high potential for coastal aquaculture, including mollusc culture. Many mollusc species are cultured for domestic and export markets including white *clam (Meretrix lyrata* Showerby) and blood cockle *(Arca granosa).*

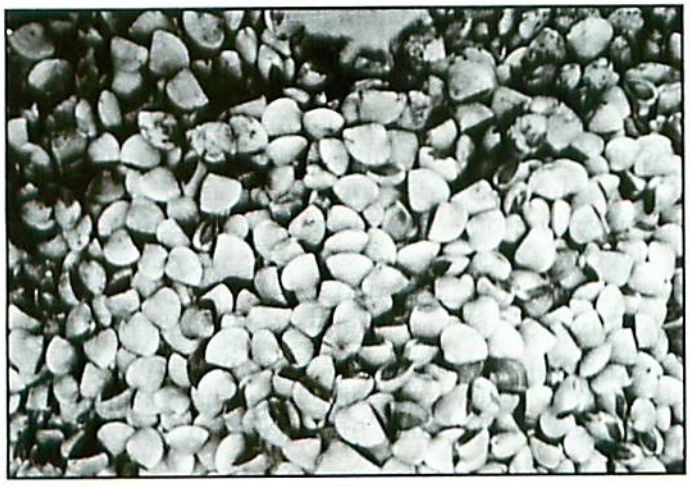

Photo by T.Q. Phu

White clam **(Meretrix lyrata *Showerby*).**

Farming of white clam in the Mekong Delta brings high profits and is the main activity for farmers in parts of the region. White clam is naturally distributed along the Mekong Delta coastline, but the most important areas are in Tiền Giang and Bén Tre provinces, where natural conditions match the biological characteristics of the white clam. White clams are common in areas near estuaries having

Photo by T.Q. Phu

Clam seed harvesting in the Mekong Delta.

mud-sand at the bottom (sand covering more than 50%) and water salinity of about 9-35 ppt.

The concept of farming clams emerged in 1982, when clam products began to be exported to international markets. At present, there are approximately 600 coastal families engaged in clam farming over a total area of 1 870 ha, of which 82.63% is used for the grow-out phase and 17.7% for the nursery phase. The main production areas for white clam farming are Gocongdong district (Tiền Giang province) and Batri district (Bến Tre province).

Techniques for clam farming include the nursery and grow-out phases. Nursery areas are near the coast and receive less than 5 hours of sunlight per day. The average area for a nursery is 3-4 ha and it is fenced with a net or bamboo stakes to prevent clams from escaping and to prevent water currents from carrying them away. Seeds are naturally supplied. Spat usually appear from June to July at a size of 15 000 to 25 000 individuals per kg. During this period, farmers collect and transport spat to the nursery. Spat are scattered in the nursery during high tide when water depth is more than 10 cm. Average nursery density is 2.65 t/ha. After 6-8 months, the clams are big enough to be harvested for grow-out farms. The highest yields obtained from nursery farms are around 61.5 t/ha, with an average of 29.64 t/ha.

Grow-out farm areas are further from the coast and are exposed to sunlight for only 2-3 hours/day. Average farm area for grow-out is 5-6 ha, and may or may not be fenced. Seed are provided from nursery farms at a size of 2 000 to 3 000 individuals per kg. Seed are scattered at the center to prevent the clams from moving out or moving to other farms. Culture density is 6.78 t/ha. During the culture period, clams move within the fenced area. Farmers rake around the fence to capture and to re-scatter clam every 1 or 2 weeks. After 12 to 13 months, the clams reach a marketable size of 25-30 g per individual. Harvesting is between April and August, when the clam's meat is the best quality. The highest yields obtained from grow-out farms are around 48.5 t/ha, with an average of 22.32 t/ha.

Average operating cost is US$1 100 per ha for nursery and US$757 per ha for grow-out (the costs of capital assets are not included) with loans being the main source of financing. Operating costs incurred include buying seeds, materials for fencing (nets, bamboo stakes), hired labor, taxes, transportation, interest and other miscellaneous expenses. Profits from nurseries are better than from grow-out farms (Table 1). Analysis in terms of farm size and initial stocking sizes of seed shows differences in productivity, total production costs, and profit on operating cost (Tables 2 and 3).

Problems for clam farmers in the Mekong Delta include natural phenomena, inadequate culture techniques, lack of financing or credit systems, and marketing. Environment-related problems that cause clam mortality include flooding, and freshwater effluent and siltation or sedimentation from the Mekong River. Reduction of water salinity in the estuaries during the rainy season causes clams to die or move out from low water salinity areas. Water currents during the rainy season also carry large amounts of silt from inland areas which deposit on the clams. Predators such as snails *(Natica maculosa, Thais, Clavigera)*, crabs *(Scylla serrata)*, starfish and fish also affect mollusc culture. Marketing problems include lack of buyers and price

Table 1. Costs and returns from clam farming in the Mekong Delta, Vietnam (1993 data, US$1= VND11 000).

Item	Nursery farming (US$/ha)	Grow-out farming (US$/ha)
Production costs		
Seeds	774.8	537.2
Materials	67.8	9.6
Transportation	11.9	24
Hired labor	62.1	57.9
Taxes	54.5	20.7
Bank interest	33.7	49.5
Miscellaneous	76.4	39.4
Total production costs	1 099.7	757
Returns	4 313.2	1 645
Profit on operating cost	3 213.4	888
Payback period (months)	7	12

Table 2. Effects of farm size on productivity, total production costs, and profit on operating costs of nursery clam farming, Mekong Delta, Vietnam (US$1= VND11 000).

Indicator	Farm size (ha)	
	1-3	4-6
Productivity (t/ha/crop)	28.6	29.4
Total production costs (US$/ha)	1 109.1	1 085.5
Profit on operating costs (US$)	2 839.8	3 017.0

Table 3. Effects of farm size and stocking size of seed on productivity, total production costs, and profit on operating costs of grow-out clam farming, Mekong Delta, Vietnam (US$1= VND11 000).

Stocking size (ind/kg)	Indicator	Farm size (ha)		
		1-3	4-6	>7
300	Productivity (t/ha/crop)	14.33	16.3	20.2
	Total production costs (US$/ha)	688.6	690.6	634.2
	Profit on operating costs (US$/ha)	448.2	615.1	628.0
1 000-2 000	Productivity (t/ha/crop)	34.27	30.9	40
	Total production costs (US$/ha)	1 007.9	1 624.8	851.5
	Profit on operating costs (US$/ha)	1 065.0	1 109.0	1 505.6

fluctuations. Exploitation of the natural clam population by farmers also has an impact. These problems constrain the development of clam culture in the Mekong Delta.

Clam farming contributes to the total household income of small-scale farmers in the coastal areas of the Mekong Delta. Research and development efforts should be directed to strengthening clam culture in this region to alleviate the problems faced by clam farmers. Related government laws and policies that are strictly enforced are also needed.

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