

## ***Gracilaria Edulis* Farming As A Household Aquaculture Option For Coastal Communities.**

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Currently the aqua trade on *Gracilaria* is dependent on the exploitation of wild stocks. The locations where seaweed is collected for commercial purposes were Mannar, Trincomalee, Puttalam and Kalpitiya. Seasonal variability and the limited stocks in the wild is a constraint for consistent supply of seaweeds to meet the demand. It can also lead to depletion of natural stocks by heavy exploitation for the export purpose. Hence, the future of seaweed exports will depend on the development of culture of seaweed as an industry. Experimental cultures of *Gracilaria edulis* in open water have been conducted successfully. Open water methods of *Gracilaria* culture offers prospects to introduce as a community based aquaculture technique for low-cost, low-risk culture *Gracilaria* species.

Culture trials of seaweed *G.edulis* were commenced in December 2001 with financial assistance of Export Development Board of Sri Lanka. Pilot scale experimental trials were conducted in Rekewa and Kalpitiya among the potential sites selected in the preliminary site survey carried out from Kirinda to Puttalam . Among the three identified species for culture, namely, *Gracilaria edulis*, *Gracilaria(verucosa type)* and *Hypnea*, only *G. edulis* was used in the present study. The two methods those were used in the experimental culture trials were monoline culture in open water, and monoline culture in enclosures.

Daily growth rate (fresh weight) of *G.edulis* in Puttalam Lagoon ranged from 5% to 14%/day while it ranged from 7% to 14%/day in Rekawa Lagoon. Optimum salinity for culture of this species was observed in both sites during experimental trials. 30% reduction in loss of biomass (fresh weight) of *G .edulis* was recorded in enclosures than that of in open water resulting 1.7 fold yield compared to the yield obtained in open water.

The net profit earned by open water method is less than that of enclosure method. However, considering the capital cost involved in the two methods and the investing power of a small-scale farmer the open method offers prospects for promoting it as a household aquaculture practice.