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**Experimental Cultivation with Economics of Cultivated *Kappaphycus Alverzii* (Doty) Doty at Three Different Locations of Palk Bay Waters, Tamil Nadu, Southeast Coast of India**

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**Abstract**

*Kappaphycus alvarezii* cultivation was carried out during January 2014 to December 2014 at three different locations (Parangipettai, Manora and Palakudi) of Palk Bay waters, Tamil Nadu, Southeast coast of India. The growth rate and carrageenan yields were compared in relation to environmental factors among these different locations. The mean crop yields were found to be 256.37±15.29 kg FW raft<sup>-1</sup>, 268.35±8.32 kg FW raft<sup>-1</sup> and 273.35±17.02 kg FW raft<sup>-1</sup> at Parangipettai, Manora and Palakudi respectively with respective mean DGRs of 3.22±0.13%, 3.33±0.07% and 3.37±0.13%. The mean SRC yields were 33.57±1.78%, 33.86±2.51% and 34.13±1.92% at Parangipettai, Manora and Palakudi respectively with respective mean gel strength of 352.09±32.13 gcm<sup>-2</sup>, 338.09±21.19 gcm<sup>-2</sup> and 324.66±17.76 gcm<sup>-2</sup>. The environmental parameters viz., seawater temperature, salinity, nitrate and phosphate played an important role in the growth and carrageenan yield of this seaweed. The carrageenan yields and gel strength were comparable with the ones of International standard (Carrageenan yield more than 27% and Gel strength more than 250 gcm<sup>-2</sup>). Grazing by mollusks was severe at Parangipettai during July 2014 to September 2014. Epiphytic algae viz. *Lyngbya majescula* and *Cladophora fascicularis* created a problem in maintenance of the rafts by entangling with the substrate (bamboos and ropes) during April 2014 to June 2014 at Manora and Palakudi. The average monthly income per member expected was Rs. 17019/- (US\$ 258) (Rs. 66=1 US\$), Rs. 18057/- (US\$ 274) and Rs. 18491/- (US\$ 280) at Parangipettai, Manora and Palakudi respectively. This study indicated the feasibility of commercial cultivation in coastal waters of Cuddalore (Parangipettai), Tanjore (Manora) and Pudukkottai (Palakudi) districts creating a livelihood to the coastal fisherfolk.

**Keywords:** *Kappaphycus alvarezii*, Economics, Crop yield, Cultivation, Carrageenan (SRC) yield