

Ecological Growth and Optimal Timing of Planting in Two Economic Seaweeds

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Abstract

In this study, the commercial seaweeds were cultivated in the Persian Gulf coastal areas. A culture system for two agarophyte and carrageenophyte seaweeds *Gracilariopsis persica* and *Hypnea flagelliformis* has been developed, using floating rope for grow-out. Correlations between RGR and environmental parameters were investigated using Pearson correlate Test. The results indicated that the highest biomass for *Gp. persica* (RGR = $28.77 \pm 0.4\%$ day⁻¹) and *H. flagelliformis* (RGR = $25.16 \pm 0.3\%$ day⁻¹) was obtained in February and January, respectively. In seaweed *Gp. persica*, positive correlation was found between RGR and O₂ ($r = 0.558$; $P < 0.001$), and negative correlations were found between RGR and temperature ($r = -0.657$; $P < 0.001$) and salinity ($r = -0.607$; $P < 0.001$). In seaweed *H. flagelliformis*, negative correlation was found between RGR and temperature ($r = -0.706$; $P < 0.001$). These results demonstrated the great potential of *Gp. persica* and *H. flagelliformis* for mariculture.

Keywords: Cultivation ecology, Physico-chemical agents of water, *Gracilariopsis persica*, *Hypnea flagelliformis*, Persian Gulf.
