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Optimization of certain physical parameters for the mariculture of *Gracilaria edulis* (Gmelin) Silva in Minicoy lagoon (Laccadive Archipelago)

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Abstract

Mariculture of the agar-yielding, red seaweed, *Gracilaria edulis* (Rhodophyta) was conducted in Minicoy lagoon during 1990–1992. Experiments were conducted on dry matter accumulation, effects of planting density, depth of water above culture nets, periodic cleaning for removal of epiphytes, grazing and the yield as well as regeneration of *G. edulis* after successive harvests to understand the optimum requirements of this seaweed. Six culture methods were tested and the yields obtained were compared to arrive at a culture method suitable for Minicoy lagoon.

Keywords: Gracilaria edulis; Mariculture; Optimum parameters

1. Introduction

Minicoy Atoll (08°18'N and 73°E) of the Laccadive Archipelago in the Arabian sea has a vast lagoon measuring about 9.66 km^2 (Gardiner, 1903). The intertidal belt is formed of *Thalassia* beds accommodating more than 30 genera of seaweeds (Kaliaperumal et al., 1989). However, the commercially-important, agar-yielding *Gracilaria edulis* (Gmelin) Silva was not found in Minicoy Atoll prior to its introduction by the Central Marine Fisheries Research Institute, Cochin in 1989 (Kaladharan and Chennubhotla, 1993).

It is estimated that about 40000 t (fresh wt.) of seaweed are exploited for extraction of agar-agar and alginic acid every year in India. As the exploitation of desired species

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