

STUDIES IN DOMESTICATION OF EUCHEUMA UNCINATUM

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Introduction

An important requirement for the cultivation of any organism is knowledge of its growth patterns, growth rates, and its productivity. Such knowledge has been obtained for the red alga, Eu cheuma uncinatum, an iota-carrageenan producer. In nature it is an annual endemic plant of the Gulf of California. It is commonly found in Feb. - July, (Norris 1975). Natural populations have been experimentally harvested and good quality iota-carrageenan has been extracted (Dawes et al. 1977). From our observations of natural populations the plants are quite sparse, and are attached to mid- and low- intertidal rocks by a small and relatively weak holdfast.

Our investigation of Eu cheuma uncinatum as a suitable alga for cultivation has included the following basic topics:

1. Conditions for optimum growth
2. Maximum potential for growth
3. Effectiveness of various nutrient application methods
4. Manipulation of stages in the life history
5. Selection of superior quality plants
6. Storage of seed stock

Results and Conclusions

Growth

In April 1977 a small branch (2 gr) of E. uncinatum was transplanted from Guaymas, Mexico (water temperature about 28°C) to the cool 17°C waters of