

Effects of epifauna on algal growth and quality of the agar produced by *Gracilaria verrucosa* (Hudson) Papenfuss

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Abstract

Seaweeds are important items of the Chilean economy, being exported as raw material and used locally for gel extraction (Santelices & Lopehandía 1981). Natural beds of economically important Phaeophyta and Rhodophyta of the Chilean coast are used as substratum by numerous species of sessile animals such as mussels and bryozoans. Although several authors (Dixon et al. 1981; Oswald et al. 1984; D'Antonio 1985), have reported deleterious effects of epifauna on seaweeds, little attention has been paid to epifaunal effects on algal growth and gel quality. It is well known that some seaweeds readily absorb NH_4^+ (DeBoer 1979; Wallentinus 1984; Fujita & Goldman 1985; Lobban et al. 1985), and since ammonia is the main nitrogenous excretory product of many aquatic invertebrates it is likely that epifauna excretory products could enhance algal growth. However, it is difficult to predict a priori what effects the epifauna might have on algal growth, since the animals could also reduce growth through light interference.

Keywords

Seaweed, Marine algae, Epiphytism, Agar yield, Agar strength, Polyculture.