

Implications of clonal and chimeric-type thallus organization on seaweed farming and harvesting

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Abstract

Clonal seaweeds are capable of regrowing from thallus fragments, while unitary seaweeds lack this capacity. This capability determines significant differences in the farming and harvesting models to be applied to the two types of algae. Farming of non-clonal species in general, requires more steps and a greater diversity of technologies than clonal seaweeds. In addition, clonal seaweeds may exhibit intra-clonal variation, considered here as an additional source of variation from those known for unitary seaweeds (e.g. intra-individual and inter-population variation). Intra-clonal variation may modify the efficiency and predictability of strain selection practices based purely on intra-individual and inter-population variation. Coalescence and formation of chimeric thalli occurs in many species of economic red algae. Coalescence affects recruitment success, survival and growth rates in many of these taxa. It is concluded that the farming and harvesting models derived from unitary organisms have to be modified when applied to seaweeds with clonal or chimeric-type thallus organization.

Keywords

Clones, Coalescence, Harvesting, Farming, Seaweeds.