

Innovations in Biotechnology

Seaweed Biotechnology

Biodiversity and Biotechnology of
Seaweeds and Their Applications



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Editors

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SEAWEED BIOTECHNOLOGY: AN ANSWER TO ENVIRONMENTAL ISSUES AND HUMAN HEALTH PROBLEMS

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ABSTRACT

This chapter provides information relating to seaweeds' pharmacological, clinical, industrial, and environmental researches that have been carried out. Compared to terrestrial foodstuff, marine alga provides unique compounds that are only found in marine life along with the high concentrations of trace elements, minerals, enzymes, vitamins, protein, polysaccharides, and various secondary metabolites. Seaweeds have been used in culinary from earlier times in Asian foods. Advance farming also encourages the farmers to utilize the seaweeds as nature manure and/or fertilizer to promote standing crop yield and increase crop fertility. Recently, seaweed biomasses have gained attention for the production of biofuels as an alternative renewable source, also referred to as "next-generation fuel." Aquacultures are also widely accepting the seaweeds for the process of the wastewater containing dyes, heavy metals, nitrogen, and phosphorous. Agar and alginates are two major compounds extracted from seaweed by industries to be used as raw sources. Thus, this provides an insight to the application of seaweed biotechnology to human and environmental welfare.
