IJARSCT
International Journal of Advanced Research in Science, Communication and Technology
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
ISSN: 2581-9429
Volume 5, Issue 2, May 2025
Impact Factor: 7.67

Soil Algal Flora and Cyanobacteria of Sugarcane Field from the Khuldabad Region Dist. (Aurangabad) Chhtrapati Sambhaji Nagar, Maharashtra, India

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Abstract: *Soil algae constitute an important group of soil microflora. Ecologically soil algae are significant and play a crucial role in soil fertility. To study the algal flora of cultivated fields, a sugarcane (Saccharum officinarum L.) field located in the Khuldabad tehsil area of (Aurangabad) Chhtrapati Sambhaji Nagar district of Maharashtra has been selected. Algal samples from moist places of the sugarcane field were collected at regular intervals from November 2021 to December 2022. Bold`s basal medium was also used to culture algae from the soil of the sugarcane field. Under a research microscope, algae samples were carefully examined, and their identities were confirmed using standard algae literature. A total of 69 species from 35 genera belonging to the families Chlorophyceae, Xanthophyceae, Bacillariophyceae and Cyanophyceae were identified and recorded. Cyanobacteria were found to be dominant. The main algal forms were Gloeocystis, Trebouxia, Chlorella, Nitzschia, Chroococcus, Gloeothece, Aphanothece, Myxosarcina, Oscillatoria, Phormodium, Lyngbya, Microcoleus, Nostoc, Plectonema and Scytonema. Physic-chemical analysis of the soil of the sugarcane fields was carried out by choosing important physical and chemical parameters, such as pH, electrical conductivity, organic carbon, affordable nitrogen, affordable phosphorus, and available potassium. It was discovered that the soil of a sugarcane crop contained algae.*

Keywords: Cyanobacteria, Physicochemical parameters, Soil algal flora, Sugarcane field

DOI: 10.48175/IJARSCT-26233