

DIVERSITY OF FILAMENTOUS NON-HETEROCYSTOUS FORMS OF CYANOBACTERIA (OSCILLATORIACEAE,) IN AGRICULTURE FIELDS OF NORTH BIHAR, INDIA

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ABSTRACT : The increasing concern over the exploitation of cyanobacteria for bioactive compounds has stimulated the cyanobacteriologists for proper documentation of cyanobacteria of different habitats. In this study, the diversity of filamentous non-heterocystous forms of cyanobacteria inhabiting agriculture fields of North Bihar was investigated. The climate of north Bihar is suitable for cyanobacterial proliferation as it provides suitable growth conditions in terms of pH, temperature, moisture and nutrients supply. The samples were randomly collected from water bodies and moist soil surfaces and enumerated under microscope in the laboratory. The study showed the presence of 40 species belonging to 7 genera. Out of 40 species, *Arthrospira* were represented by 4, *Microcoleus* by 1, *Oscillatoria* by 12, *Phormidium* by 5, *Lyngbya* by 10, *Spirulina* by 6 and *Symploca* by 2. The occurrence of filamentous and non-heterocystous forms of cyanobacteria in the agriculture fields of north Bihar suggested that the soil is enriched with nutrients particularly nitrogen. The cyanobacteria of north Bihar have not been well studied for biochemical characterization and for bioactive compounds. The documentation might prove to be fruitful in future use of cyanobacteria in biotechnological applications, including management of cultivable land in terms of fertilizers.

Key Words : *Agriculture fields, cyanobacteria. diversity. non-heterocystous, north Bihar, Oscillatoriaceae*