

## RESEARCH ARTICLE

CYANOBACTERIAL DIVERSITY OF SOYBEAN (*Glycine max* (L.) Merrill) FIELDS

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## ABSTRACT

The present study deals with the phycological characteristics of soybean [*Glycine max* (L.) Merrill] crop fields in Beed district (M.S.) in India. To study the cyanobacterial diversity 30 samples were collected randomly from surface and subsurface of soil from soybean crop fields during kharif 2014. Cyanophycean members have been found very common *Oscillatoria*, *Lyngbya*, *Phormidium*, *Scytonema*, *Plectonema* and *Nostoc*.

**KEY WORDS:** Soybean Crop, Cyanobacteria And Phycology.

## INTRODUCTION

Cyanobacteria constitute the most diverse group of plant kingdom and occupy a variety of terrestrial habitats including soil rocks, wall and caves. Soil are the natural bodies comprising the uppermost layer of the earth surface performs many functions essential to life. Considerable work has been on Cyanobacterial diversity of fresh water habitat of Marathwada region Kamat (1974, 1975), Sarode and Kamat (1979), Ashtekar (1980), Kamble (2008) and Andhale (2008), but very few reports were made on Cyanobacterial diversity of soil such as Jadhav and Nimbore (2015). There fore there is a need to work on Cyanobacterial diversity of soil from Soybean crop fields.

## MATERIALS AND METHODS

To study the cyanobacterial diversity of soybean fields the cyanobacterial samples were collected randomly from surface and sub-surface of soil in sterilized collection bottles. Collected samples were brought in laboratory and observed under microscope and identified with standard literature on cyanophyceae (Desikacharya 1959).

## RESULTS AND DISCUSSION

During present study phycological characteristics in soybean crop fields observed that the 30 cyanobacterial taxa were observed under 6 genera. Out of these 8 under *Oscillatoria*, 5 are *Lyngbya*, 7 of *Phormidium*, 3 with *Scytonema*, 2 under *Plectonema* and 5 of *Nostoc*. Among those *Oscillatoria*, *Lyngbya*, *Phormidium* and *Nostoc* were dominant. The similar kind of observation were made by Prasad (2005), and Jadhav and Nimbhore (2015) in wheat fields. Shah Rinku and Gajaria (2005) in Sugarcane field. Chaporkar and Gangawane (1984) studied the blue green algal flora of some cultivated soils.

**Table.1. Algal taxa of Cyanobacteria encountered from soybean crop fields .**

Sr.No.	Name of Cyanobacteria	Sr.No.	Name of Cyanobacteria
1	<i>Oscillatoria abscura</i>	16	<i>Phormidium bobneri</i>
2	<i>Oscillatoria acuminata</i>	17	<i>Phormidiumcorium</i>
3	<i>Oscillatoria acutta</i>	18	<i>Phormidium fragile</i>
4	<i>Oscillatoria chlorina</i>	19	<i>Phormidium molle</i>
5	<i>Oscillatoria obscura</i>	20	<i>Phormidium ustarii</i>
6	<i>Oscillatoria ornata</i>	21	<i>Scytonema bobneri</i>
7	<i>Oscillatoria principis</i>	22	<i>Scytonema javanicum</i>
8	<i>Oscillatoria tenuis</i>	23	<i>Scytonema mirabile</i>
9	<i>Lyngbya aestuarii</i>	24	<i>Plectonema nostocorum</i>
10	<i>Lyngbya corticicola</i>	25	<i>Plectonema radiosum</i>
11	<i>Lyngbya major</i>	26	<i>Nostoc commune</i>
12	<i>Lyngbya magnifera</i>	27	<i>Nostoc linckia</i>
13	<i>Lyngbya spiralis</i>	28	<i>Nostoc microscopicum</i>
14	<i>Phormidium ambiguum</i>	29	<i>Nostoc muscorum</i>
15	<i>Phormidium abronema</i>	30	<i>Nostoc pruniforme</i>

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