

Book Review

Role of Cyanobacteria on Rice Field Soil Fertility of Bangladesh : Qualitative and Quantitative Assessment of Cyanobacteria in Low Lying Rice Field
by Farzana Binta Amin, Z. N. Tahmida Begum and Rameswar Mandal,
Lambert Academic Publishing, Category: Botany, ISBN- 13: 978-3-8484-3219-6, Pages x + 176, 2012, Germany

The contents of the book appear to me as a thesis/dissertation/report based on some sequential studies on Cyanobacteria under the supervision of a highly professional expert. This is a well-timed study planned and accomplished to provide an alternative approach in eco and farmers-friendly lowland rice agriculture. The study deserves all sorts of appreciation from the people who are related with the relevant science and rice culture.

The Book (or published thesis) contains five chapters as we generally see in a thesis. They are sequentially, Introduction, Review of Literature, Materials and Methods, Results, Discussion and Bibliography etc.

Well start with a brief introduction for a beginner who intends to work with Cyanobacteria both as a student or researcher dealing with basic microbiology or applied one. As the microbes are associated with nitrogen-fixing, I am sure this work would usher a new era in developing microbial fertilizer good for eco-friendly agriculture, a demand of the day.

Chronological presentation is quite logical. Accordingly, the authors have cited available information since mid-1960s and onwards under the sub-headings:

1. Qualitative account of cyanobacteria
2. Quantitative account of cyanobacteria
3. Relationship of cyanobacteria with the fertility of rice field
4. Cyanobacterization (algalization) and growth and yield of rice

A good number of works, in this field have already been done in Bangladesh earlier as we came to know from the literatures cited.

However, most of the citations are presented in a style like

Saha and Mandal (1979a) reported, Mazid and Khatun (1980) isolated, Zimmerman *et al.* (1980) studied etc lack literary synchronization.

Materials and methods are described in details from field selection, soil collections to field and pot experiments. Even the analytical procedures mentioned here would also be a readymade reference for a researcher in this field. With the introduction of HYV, farmers are accustomed of using lot of chemical (N-P-K-Zn) fertilizers. Therefore, it was quite

reasonable to consider those nutrient elements and Cyanobacteria growth interactions in those studies.

Assessment of Cyanobacteria in rice field across the country is a huge task. Qualitative and quantitative variation with respect to the environment and soil type must be significant reference for the next researchers.

The authors showed the dependence of cyanobacteria population on soil pH, N, Organic carbon, P and S both through simple and multiple regression method. They could follow, step wise regression method considering all the independent factors. Then the most important factors responsible for the cyanobacterial growth could be ascertained. The same experiment was replicated in another site also. So, considering a different analytical (considering the site a factor) tool some more information could be gathered.

Anyway, the conclusive remarks from this work are that the cyanobacterial population is significantly related to pH, available P and available S but negatively related to total N. And the authors have also attained a break-even point of P and N at P60N60, a conclusion might help to develop cultural practices good for rice farmer.

I wish a success of the work and the published work.

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