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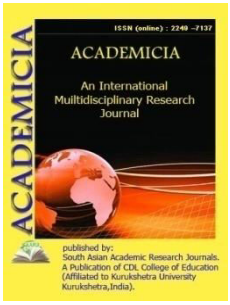

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A BRIEF DESCRIPTION ON BIOFERTILIZERS

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ABSTRACT

The global rise in human population poses a serious danger to each person's food security, since agricultural land is restricted and, in some cases, disappearing. As a result, agricultural production must be substantially increased during the next several decades to satisfy the enormous food demand of the growing population. Not to mention that a heavy reliance on chemical fertilizers for increased output ultimately harms both the environment and human health. Because of its wide potentiality in improving crop productivity and food safety, using microorganisms as biofertilizers is seen as a potential alternative to chemical fertilizers in the agricultural industry. In the agricultural sector, certain microorganisms such as plant growth boosting bacteria, fungus, Cyanobacteria, and others have been found to exhibit biofertilizer-like properties. Extensive research on biofertilizers has shown that they are capable of delivering necessary nutrients to the crop in adequate quantities, resulting in an increase in crop production. The current study elucidates the many methods by which biofertilizers enhance plant development while also providing protection against several plant diseases. The goal of this study is to examine the critical functions and uses of biofertilizers in many industries, such as agriculture, bioremediation, and ecology.

KEYWORDS: *Biofertilizer, Crop Production, Ecosystem, Sustainable Agriculture.*

REFERENCES:

[1] T. T. Win, G. D. Barone, F. Secundo, and P. Fu, "Algal Biofertilizers and Plant Growth Stimulants for Sustainable Agriculture," *Industrial Biotechnology*. 2018, doi: 10.1089/ind.2018.0010.

[2] R. Chatterjee and S. Bandyopadhyay, "Effect of boron, molybdenum and biofertilizers on growth and yield of cowpea (Vigna unguiculata L. Walp.) in acid soil of eastern Himalayan region," *J. Saudi Soc. Agric. Sci.*, 2017, doi: 10.1016/j.jssas.2015.11.001.

[3] L. Herrmann and D. Lesueur, "Challenges of formulation and quality of biofertilizers for successful inoculation," *Applied Microbiology and Biotechnology*. 2013, doi: 10.1007/s00253-013-5228-8.

[4] N. T. Khan, Namrajameel, and M. J. Khan, "Microbial Biofertilizers," *Int. J. Biopharm. Sci.*, 2018.

[5] "Biofertilizers." https://byjus.com/biology/biofertilizers/ (accessed Aug. 17, 2017).

[6] S. Munda *et al.*, "Inorganic phosphorus along with biofertilizers improves profitability and sustainability in soybean (Glycine max)–potato (Solanum tuberosum) cropping system," *J. Saudi Soc. Agric. Sci.*, 2018, doi: 10.1016/j.jssas.2016.01.008.

[7] S. Mukhtar, I. Shahid, S. Mehnaz, and K. A. Malik, "Assessment of two carrier materials for phosphate solubilizing biofertilizers and their effect on growth of wheat (Triticum aestivum L.)," *Microbiol. Res.*, 2017, doi: 10.1016/j.micres.2017.08.011.

[8] H. I. Khan, "Appraisal of Biofertilizers in Rice: To Supplement Inorganic Chemical Fertilizer," *Rice Sci.*, 2018, doi: 10.1016/j.rsci.2018.10.006.

[9] M. A. Deshmukh, R. M. Gade, Y. K. Belkar, and M. D. Koche, "Efficacy of bioagents, biofertilizers and soil amendaments to manage root rot in greengram," *Legum. Res.*, 2016, doi: 10.18805/lr.v0iOF.6772.

[10] S. Kaewchai, K. Soytong, and K. D. Hyde, "Mycofungicides and fungal biofertilizers," *Fungal Divers.*, 2009.