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# Impact of Biofertilizers on Paddy (*Oryza sativa* L.) Cultivar Jaya

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**Abstract:** *In present study, impact of various biofertilizers on growth parameters (height of the plant & number of tillers) in Paddy (Oryza sativa L. cv. Jaya) was assessed. Randomized block design techniques was followed and was replicated thrice with twelve treatments such as T0: Control (without fertilizer), T1: Chemical fertilizer (19:19:19), T2: Blue Green Algae (BGA), T3: Azospirillum brasilense, T4: Bacillus megaterium, T5: Trichoderma viride, T6: Mycorrhizae, T7: Pseudomonas fluorescens, T8: BGA+Pseudomonas fluorescens,T9: BGA+Mycorrhizae, T10: Azospirillum brasilense+Bacillus megaterium and T11: Azospirillum brasilense+Bacillus megaterium+Pseudomonas fluorescens. Three splitted doses of chemical fertilizers were followed. The results show that all biofertilizers revel significant impact on height and number of tillers in Paddy, Oryza sativa (L. cv. Jaya). Also, combination of biofertilizers (T8 to T11) exhibit enhanced growth parameters than application of sole biofertilizers (T1 to T7). The results suggest that biofertilizers from microorganisms can replace chemical fertilizers to increase crop production. The study recommends that biofertilizers from microorganisms can replace chemical fertilizers to increase crop production. In principle, biofertilizers are less expensive and are more environmentally-friendly than chemical fertilizers.*

**Keywords:** Biofertilizers, Growth Parameters, *Oryza sativa*, Paddy, Randomized Block Design

## REFERENCES

**[1].** Ajmal M et al (2018). Biofertilizer as an Alternative for Chemical Fertilizers. J. Agri. Sci. 7(1): 1-7.
**[2].** FNCA. (2006). Biofertilizer Manual. FNCA Biofertilizer Project Group, Forum for Nuclear Cooperation in Asia (FNCA), March 2006. pp. 138. ISBN: 4-88911-301-0 C0550.
**[3].** Mishra D., Rajvir S., Mishra U. & Kumar S. S. (2013). Role of bio-fertilizer in organic agriculture: a review. Research Journal of Recent Sciences. 2: 39-41.
**[4].** Panse V. G. & P. V. Sukhatme. (1967). "Statistical Methods for Agricultural Workers," 2nd Edition, Indian Council of Agricultural Research, New Delhi, 1967.
**[5].** Patil S. D., Kusalkar D. V., Patil H. M. & Bhoite K. D. (2020). Seasonal incidence of insect pests on rice and impact of various abiotic factors on their incidence. J Pharma Phytochem. 9: 1869-1872.
**[6].** Pawar Prabhakar R., Mhatre Ramesh P. and Supnekar Santosh P. (2021). Preliminary survey of major insect pests of rice (Oryza sativa L.) from Panvel, Navi Mumbai, India. Intern. J. Zool. Invest. 7 (1): 22-31. https://doi.org/10.33745/ijzi.2021.v07i01.003.
**[7].** Qureshi S. P., Belurkar Y., Mehar P., Kodape D. & Selokar M. (2018). Study of diseases on rice (*Oryza sativa*) in major growing field of Bhandara District. Intern J Agricul Sci. 10: 5573-5575.
**[8].** Rai M. K. (2006). Handbook of Microbial Biofertilizers. Food Products Press, An imprint of The Haworth Press, Inc., 10 Alice Street, Binghamton, NY 13904-1580. ISBN 13: 978-1-56022-269-9.
**[9].** Shinde A. A. (2017). Rice production in Konkan region -An economic analysis. Ph. D. Thesis submitted to Dr. Balasaheb Sawant Konkan Krishi Vidyapeeth Dapoli, Ratnagiri, Maharashtra, pp. 206.
**[10].** Subhash R., S. Triveni & K. Damodarachari. (2016). Biofertilizers for Sustainable Production in Oil Seed Crops. Journal of Agriculture and Veterinary Sciences. 3(6): 435-444.