Effect of Rice Husk Biochar and Inorganic Nitrogen on Growth and Yield Parameters of Direct Seeded Rice

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ABSTRACT

A field experiment entitled "Effect of Rice Husk Biochar and Inorganic Nitrogen on Growth and Yield Parameters of Direct Seeded Rice" was carried out at Agricultural college farm, Bapatla during k*harif,* 2020-21. The experiment was performed with twenty treatments in split-plot design. The main plot comprised four biochar treatments (0, 2.5, 5.0 and 7.5 t ha^{-1}) and sub plot with five different nitrogen levels (0, 40, 80, 120 and 160 kg N ha^{-1}). Among the biochar levels, plant height (104.8 cm), crop growth rate (6.4 g day^{-1}), number of panicles m^{-2} (302.5), panicle length (22.6 cm), total number of grains $panicle^{-1}$ (194.1) were significantly higher with the application of biochar @ 7.5 t ha^{-1} as compared to control treatment. Incase of inorganic nitrogen levels, 160 kg N ha^{-1} treatment was registered the higher plant height (106.2 cm), crop growth rate (6.8 g day^{-1}), number of panicles m^{-2} (307.3), panicle length (23.4 cm), total number of grains $panicle^{-1}$ (196.7) were significantly higher with the application of biochar @ 7.5 t ha^{-1} as compared to control treatment. It was concluded that the application of biochar@ 7.5 t ha^{-1} or 5.0 t ha^{-1} and inorganic nitrogen @ 160 or 120 kg N ha^{-1} were significantly improved the growth parameters and yield attributes of directed seeded rice during the study.

Key words: *Global Warming, Microbiota, Nucleic Acids, Net Assimilation Ratio and Cell Division*