Effect of foliar application of signal molecules on yield and yield attributes of rice (*Oryza sativa*.L) under salinity stress

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ABSTRACT

A field experiment was conducted at Agricultural College Farm, Bapatla during *kharif*, 2023-24 to explore the effect of foliar application of signal molecules on yield and yield attributes of rice under salinity stress. The experiment was carried out with two contrast varieties (MCM103- Salt tolerant, as a check; BPT 5204- Salt susceptible) in randomized block design with eight treatments *viz.,* MCM 103 (Check variety) - T_1, 0.25 mM/L of SNP - T_2, 0.50 mM/L of SA -T_3, 0.50 mM/L of BR -T_4, 0.25 mM/L SNP+0.50 mM/L SA -T_5, 0.25 mM/L SNP+0.50 mM/L BR -T_6, 0.25 mM/L SNP+ 0.50 mM/L SA+0.50 mM/L BR -T_7 and No spray control -T_8 in three replications. The foliar application was done at two different growth stages: before and after reproductive stages. The salt tolerant MCM 103 recorded superior performance over salt sensitive BPT 5204 on yield and yield attributes under salinity stress. The foliar application of signal molecules had positive effects on the yield and yield attributing traits *viz.,* number of spikelets per panicle, number of filled grains per panicle, spikelet fertility (%) and grain yield. Among all the foliar treatments, treatment consortia (T_7) found to be the best, significantly increased yield and was consistent with MCM 103 in the present study.

Key words: *Grain yield, Rice, Salinity stress, Signal molecules and Spikelet fertility*