



Influence of Agronomic Management Practices on Rhizosphere Microbial Biodiversity in Coleus [*Plectranthus rotundifolius* (Poir.) J.K. Morton]

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Abstract: An investigation was conducted at, College of Agriculture, Vellayani, Thiruvananthapuram, Kerala to assess the influence of method of planting, nutrient management practice with consortium biofertilizer (INM) and growth promoters in coleus on the diversity of microbiome population in rhizosphere. The experiment was laid out in split plot design with five main plots and six subplot treatments, replicated four times. The main plot treatments included five methods of planting and six sub plot treatments involving combinations of two nutrient management practice and three growth promoter. The population of microbes (*Azospirillum lipoferum*, *Azotobacter chroococcum*, *Bacillus megaterium*, *Bacillus sporothermodurans*, fungi and actinomycetes) among the methods of planting were higher in raised beds planted at a closer spacing (30 cm x 15 cm) and the crop management practice of manuring with 60:30:120 kg NPK ha⁻¹ + PGPR Mix 1 @ 2 per cent, irrespective of the growth promoter applied. Highest counts were recorded for bacteria and, the genera *Bacillus sporothermodurans* was most prominent. The interaction effect of main plot and subplot treatments revealed higher population of microorganisms in bed planting with closer spacing, nutrient management practice of 60:30:120 kg NPK ha⁻¹ + PGPR Mix 1 and irrespective of the growth promoter.

Keywords: Coleus, Growth promoters, Planting method, Microbes, Nutrient management, Rhizosphere
