

RESPONSE OF RHIZOBIAL STRAINS ON BIOCHEMICAL TRAITS AND NUTRIENT UPTAKE IN MUNGBEAN (*VIGNA RADIATA* L. WILCZEK) UNDER MOISTURE STRESS

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Abstract: The present study was conducted to assess the biochemical responses and nutrient uptake in response to *rhizobial* inoculations in mungbean, and to screen the *rhizobial* isolates for drought tolerance. A field experiment was designed in randomized block design and replicated thrice during *kharif* 2016 at Crop Physiology Field Area, CCS, Hisar. The experiment consisted of two levels of treatments (1) without inoculation (only RDF) and (2) with inoculation (RDF with combination of five *rhizobial* strains viz. *Vigna* 703 + PSB strain P-36, MR 63, MR 54, MB 17a and MH 8b2) and two environments i.e. rainfed (no post sowing irrigation) and irrigated. Membrane stability index, leghaemoglobin content, chlorophyll content reduced by 17.7 %, 24.5% and 2.9% resp. under rainfed conditions while the plants inoculated with *rhizobial* isolate MR63 and MB 17a showed greater chlorophyll content (20.2% and 16.2%), LHb (29.1% and 22.9%) and MSI (19.4% and 17.9%) and enhanced nutrient uptake over RDF.

Keywords: Biochemical traits, Drought, Mungbean, Nutrient, Rhizobia

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