

COMPARATIVE PERFORMANCE OF DIFFERENT ORGANIC SOURCES OF NUTRIENTS AND PLANTING SYSTEMS ON GROWTH AND YIELD OF SCENTED RICE (*ORYZA SATIVA* L.)

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Abstract: A field experiment was conducted at crop research farm, Department of Agronomy, Allahabad School of Agriculture, Sam Higginbottom Institute of Agricultural, Technology & Sciences, Allahabad (U. P). It is on the near of the river Yamuna to study the effect of different planting systems and organic sources of nutrients on growth and yield of scented rice (*Oryza sativa* L.) during *kharif* season at 2010.

The field experiment was laid out in split plot design with three replications. The results showed that treatment (M₂) green manuring with *Crotalaria spp.* (M₂) gave 4.08 and 30.87% more seed yield compared than other green manuring with *sesbania spp.* (M₁) and basal application of FYM 12 t ha⁻¹ (M₃) respectively and significantly maximum growth and yield attributes plant height (70.24 cm, 98.71 cm, at 60, 100 DAS respectively), plant dry weight (14.67, 42.13, 81.71, and 145.47 g at 20, 40, 60, 80, and 100 DAS), CGR (g m⁻² day⁻¹) (00.136, 0.483, 1.442, 1.897 and 2.768 g at 0-20, 20-40, 40-60, 60-80 and 80-100 DAS), number of effective tillers hill⁻¹ (9.36), grain yield (7.85 t ha⁻¹), straw yield (7.85 t ha⁻¹), harvest index (38.05 %) and test weight (22.61 g) than other application of green manuring treatments.

The treatment (S₃) i.e. system of rice intensification (SRI), (S₃) gave 15.00 and 38.89 % significantly the highest seed yield (5.27 ha⁻¹) compared than other system of planting S₁ transplanted rice and direct seeded rice (DSR) also recorded non significantly the highest straw yield (8.25 t ha⁻¹), but significantly higher harvest index (38.52 %) and test weight (23.00 g) than other two planting system.

Keyword: System of Rice Intensification (SRI), Organic sources, Green manuring, Scented rice and Pusa Basmati -1

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