

EFFECT OF OPTIMAL, SUB OPTIMAL AND INTEGRATED NUTRIENT MANAGEMENT ON PRODUCTIVITY AND ENERGETICS OF RICE (*ORYZA SATIVA*) IN RICE-WHEAT (*TRITICUM AESTIVUM*) CROPPING SYSTEM

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Abstract : The present investigation was carried out at the Research Cum Instructional Farm IGKV., Raipur (C.G.) having *Inceptisols (Matasi)* soil during *kharif* season of 2010. The experiment was laid out in randomized block design with 3 replications. The results revealed that amongst the different optimal, sub-optimal and integrated nutrient management practices using green manure, farmyard manure and chemical fertilizers, T₁₀ consisting of 50% RDF + 50% N through green manuring recorded the highest growth, yield attributing characters and grain yield of rice (56.19 qha⁻¹). T₁₀ also recorded maximum net return (Rs. 46,117 ha⁻¹), energy output (178.38 MJ x 10³) and NPK content in soil. Application of 100% RDF (80:60:40 kg NPK ha⁻¹) also proved superior over other integrated nutrient management systems consisting farmyard manure and rice residues for yield (55.19 qha⁻¹) and energy output (176.75 MJ x 10³).

Keywords : Energetic, Integrated nutrient management, Productivity, Rice-wheat cropping system, Yield potential

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