Effect of integrated nutrient management on yield attributes, yield and nutrients uptake in rice (*Oryza sativa* L.)

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ABSTRACT : A field experiment was conducted at Fertilizer Research Station, Pura of C.S. Azad University of Agriculture and Technology, Kanpur during *Kharif* 2007 and 2008 to find out the affect of integrated nutrient management on yield attributes and yield and nutrient uptake in rice performance. Addition of paddy straw, FYM, GM, Vermi-compost and biogas slurry powder each @ 5t/ha, bio-fertilizers (BGA+BSP) and FYM+ bio-fertilizers were super imposed over 100% NPK fertilizers in each case. Application of FYM + Bio-fertilizers gave highest grain (50.83 and 49.24q/ha) and straw yield (60.17 and 58.76q/ha) and NPK uptake (193.90 and 182.55 kg/ha) and NPK use efficiency (11.47 and 11.17 kg grain/kg NPK applied). It was followed by the treatment of green manure with 48.17 and 46.34 q/ha grain yield, 55.83 and 55.66 q/ha straw yield and 178.05 and 169.82 kg/ha NPK uptake and, 10.41 and 10.01 kg grain/kg NPK use efficiency. All treatments of integrated nutrient management attained higher crop yields and yield attributes compared to 100% NPK alone application. After rice harvest, soil properties improved due to integrated nutrient sources where maximum improvement was recorded with FYM + Bio-fertilizers, GM, and FYM treatments.

Key Words: Rice, integrated nutrient management, nutrient uptake, nutrient use efficiency, yield, soil health.