

Performance of integrated use of city compost and inorganic sources of nutrients on yield, uptake of nutrients and quality of wheat (*Triticum aestivum* L)

S.B. Pandey, R.N. Singh and Shivum

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ABSTRACT : A field experiment was conducted at Crop Research Farm, Nawabganj, Kanpur, C.S. Azad University of Agriculture and Technology, Kanpur during Rabi 2012-13. The treatment consisted of seven doses i.e. (T₁) Control (T₂) city compost (10 t/ha), (T₃) city compost (5 t/ha) + 100% NPK, (T₄) city compost (5 t/ha) + 50% NPK, (T₅) 100% NPK (T₆) FYM (10 t/ha) +25% NPK and (T₇) city compost (2 t/ha) + 25% NPK. The experiment was laid out in RBD with four replications. The highest grain and straw yields of 54.0 and 80.0 q/ha were obtained with the application of city compost (5 t/ha)+100% NPK, which were computed about 108.0 and 135.0% higher than lowest grain and straw yields of 26.0 and 34.0 q/ha, respectively. Likewise, the nutrients contents of N, P, K, S, and Zn were recorded higher in grain and straw with city compost (5 t/ha) + 100% NPK in comparison to other treatments. The total uptake of these nutrients in grain and straw followed the same trend, being highest with 5 t/ha city compost + 100 % NPK and lowest at control. The application of 5 t/ha city compost + 100% NPK also produced highest protein content of 8.5% in grain. However, lysine content in grain did not show definite trend with treatments, though it was noted highest (3.05%) at control.

Key Words: Wheat (*Triticum aestivum*), city compost, inorganic fertilizer, integrated nutrients, grain-straw yields, nutrient uptake.