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Research Paper :

Effect of integrated nutrient management on productivity and nutrient uptake in wheat and soil fertility

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ABSTRACT

A field experiment was conducted at the research farm of A.S. (P.G) College, Lakhaoti, Bulandshahr (U.P) to study the effect of INM on productivity and nutrient uptake in wheat and soil fertility. The yield attributes like earhead length (cm), number of grains per earhead and 1000- grains weight (grams) increased by increasing fertility levels from 50% to 100% and with the integration of vermicompost / FYM and PSB with inorganic fertilizers (NPK and Zn) and were recorded highest with the treatment comprised of 100% recommended fertilizer dose plus vermicompost +Zn+PSB. The significantly higher grain and straw yield of wheat (52.75 and 61.65 q/ha, respectively) were recorded with the conjunctive use of vermicompost, PSB and Zn in collaboration with 100% recommended fertilizer dose as compared to its counter part of 50% recommended NPK, whether applied alone or in combination with FYM, PSB, Zn and vermicompst (VC). Significant improvement owing to appropriate combination of NPK, VC/FYM, Zn and PSB was observed for the nutrient uptake by the crop and the maximum nutrient uptake was noticed due to 100% RFD of NPK + VC +Zn +PSB and minimum with control. The maximum fertility status in terms of available N, P, K and Zn after the harvest of crop as (231.0, 18.5, 130.6 kg/ha and 1.64 mg/kg, respectively) was recorded with treatment T_{20} comprised of 100% recommended NPK + VC + Zn + PSB.

Key words : Wheat, INM, Productivity, Nutrient uptake, Soil fertility