Effect of integrated nutrient management practices on yield and nutrient uptake by wheat and their residual effect on succeeding mung crop in wheat-mung cropping system

SHABIR AHMAD RATHER* AND NARINDER LAL SHARMA
Department of Agricultural Chemistry and Soil Science, A.S. College, Lakhaoti, BULANDSHAHR (U.P) INDIA

ABSTRACT
A field experiment was conducted at Research Farm of A.S (P.G) college, Lakhaoti, Bulandshahr (U.P) to find out the effect of INM practices on yield and nutrient uptake by wheat and their residual effect on succeeding mung crop in wheat mung cropping system. Conjunctive use of PSB, Zn and FYM in collaboration with 100% rec. NPK produced significantly higher grain and straw yield of wheat as compared to its counter part of 50% Rec., NPK, whether applied alone or in combination with FYM, PSB and zinc as well as with absolute control. The yield attributes like earhead length (cm), number of grains per earhead and 1000 – grains weight (g) increased significantly by increasing fertility levels from 50% to 100% and with the integration of organics with in-organics. Significant improvement owing to appropriate combination of NPK, PSB, zinc and FYM was observed for the nutrient uptake by the wheat and the maximum nutrient uptake was noticed due to 100 % Rec. NPK +PSB+Zn +FYM and minimum with control. The yield and nutrient uptake of succeeding mung crop grown on residual fertility showed a significant effect under INM treatments and were highest for treatment T1 comprising of 100 % rec. NPK +PSB+ Zn+ +FYM. Soil fertility in terms of available NPK and Zn after the harvest of mung crop had shown a significant effect by adopting INM practices. In economic consideration, it was found that integration of PSB, Zn, and FYM with 100% rec. NPK gave highest net income (Rs. 27245/ha) and benefit: cost ratio (1.54).

Key words: Wheat-mung system, INM, Residual fertility, Nutrient uptake