



## Yield and nutrient uptake of maize (*Zea mays*)–wheat (*Triticum aestivum*) cropping system as influenced by integrated potassium management

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### ABSTRACT

A field experiment was conducted during the rainy (*khari*) and winter (*rabi*) seasons of 2010–11 and 2011–12 at the Indian Agricultural Research Institute, New Delhi, to study the performance of maize (*Zea mays* L.)–wheat [*Triticum aestivum* (L.) emend. Fiori & Paol.] cropping system with integrated potassium fertilization through muriate of potash and farmyard manure. The experiment was laid out in a randomized block design, consisting of 10 treatments and replicated thrice. All the treatments with potassium irrespective of sources resulted in significantly increased grain yield, straw yield and nutrient uptake in soil. The application of 60 kg K through muriate of potash + 30 kg K through farmyard manure resulted in the highest grain yield (4.9 t/ha) and stover yield (6.8 t/ha) in maize and grain yield (5.4 t/ha) and straw yield (8.6 t/ha) in wheat which was found significantly superior to grain yield (2.5 t/ha) and stover yield (4.9 t/ha) in maize and grain yield (3.8 t/ha) and straw yield (7.4 t/ha) of wheat in the control. All treatments applied with farmyard manure showed higher nutrient uptake as well as increased nutrient availability in soil over the control.

**Key words** : Farmyard manure, Maize–wheat cropping system, Nitrogen uptake, Yield