Effect of Fly Ash and Farm Yard Manure Application on Yield and Uptake of Nutrients by Rice Grown on Inceptisol

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ABSTRACT

A field experiment was conducted in a fine loamy mixed hyperthermic Typic Haplustept soil during *rabi*, 2004-05 to study the effect of fly ash and FYM on yield and uptake of nutrients by rice var. Tellahamsa. The grain and straw yield of rice was significantly increased with fly ash, FYM and their interactions. The highest grain (5.84 t ha^{-1}) and straw yields (7.87 t ha^{-1}) were recorded by combined application of fly ash @ 10 t ha^{-1} and FYM @ 10 t ha^{-1} which was on par with fly ash @ 15 t ha^{-1} along with FYM @ 10 t ha^{-1}. Application of fly ash along with FYM has resulted in higher uptake of nutrients by rice. The fly ash level of 10 t ha^{-1} was on par with 15 t ha^{-1}. Application of fly ash @ 10 or 15 t ha^{-1} along with FYM have resulted in increase mean total uptake of N, P, K and Zn at harvest by 2.5, 2.3, 1.7 and 2.7 times, respectively when compared to the control (FA_0 FYM_0). Similarly, FA_{10} or FA_{15} along with FYM_{10} have resulted in 38, 75, 92 and 49 percentage of increase in total uptake of S, Fe, Mn and Cu at harvest, respectively.

Key words: Fly ash, FYM, Nutrients uptake, Rice, Yield.