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Studies on nutrients integration of organic and inorganic amendments for higher production of rainfed pearl millet

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ABSTRACT : A field study was carried out during three years from 2009-10 to 2011-12 at Regional Research Station, Kali, Aligarh, C.S. Azad University of Agriculture and Technology, Kanpur. The main objective was to findout the effect of trace elements on grain yield of pearl millet in the integration of FYM and recommended dose of fertilizers. The soil of experimental field was sandy loam, having pH 8.0, organic carbon 0.23%, total nitrogen 0.02%, available phosphorus 13.9 kg/ha and available potash 115 kg/ha, therefore, the fertility status was poor. The twelve treatment combinations *i.e.*, FYM 0 t/ha, RDF + FYM 0 t/ha, RDF + FYM 0 t + $ZnSO_4$ 20 kg/ha, RDF + FYM 0 t + $FeSO_4$ 20 kg/ha, RDF + FYM 0 t + boron 10 kg/ha, RDF + FYM 0 t + gypsum 250 kg/ha, FYM 5 t/ha, RDF + FYM 5 t /ha, RDF + FYM 5 t + $ZnSO_4$ 20 kg/ha, RDF + FYM 5 t + $FeSO_4$ 20 kg/ha, RDF + FYM 5 t + boron 10 kg/ha and RDF + FYM 5 t +gypsum 250 kg/ha were tested. The pooled results of three years displayed that application of RDF + FYM 5 t + $FeSO_4$ 20 kg/ha gave significantly higher grain yield of pearl millet (3111 kg/ha), closely followed by RDF + FYM 5 t + $ZnSo_4$ 20 kg/ha (3000 kg/ha). The lowest grain yield of pearl millet recorded at FYM 0 t /ha (1331kg/ha). The growth and yield traits were concordant to the grain yield obtained from rainfed pearl millet.

KEY WORDS : Boron, $FeSO_4$, Rainfed, Trace elements, $ZnSO_4$

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