Response of manures and industrial by-products for cane yield and post harvest NPK status

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SUMMARY
Field experiment was conducted in clay loam soil at Periyanellicollai village at Chidambaram taluka, Cuddalore district, Tamil Nadu. The soil of Periyanellicollai was classified as Typic Haplustert comes under Kondal series having sandy loam texture. The available nutrient status was low in N, medium in P and K. The treatments considered of T₁ – Seasoned pressmud @ 25 t ha⁻¹, T₂ – T₁ + Enriched gypsum @ 1 t ha⁻¹, T₃ – T₂ + ZnSO₄ @ 37.5 kg ha⁻¹, T₄ – T₁ + Lignite fly ash @ 25 t ha⁻¹, T₅ – T₁ + Vermicompost @ 5 t ha⁻¹, T₆ – Vermicompost @ 5 t ha⁻¹ + enriched gypsum @ 1 t ha⁻¹, T₇ – T₆ + ZnSO₄ @ 37.5 kg ha⁻¹, T₈ – Vermicompost @ 5 t ha⁻¹ + lignite fly ash @ 25 t ha⁻¹, T₉ – Bio compost @ 5 t ha⁻¹, T₁₀ – T₁ + Enriched gypsum @ 1 t ha⁻¹, T₁₁ – T₁₀ + ZnSO₄ @ 37.5 kg ha⁻¹, T₁₂ – T₉ + Lignite fly ash @ 25 t ha⁻¹, T₁₃ – FYM @ 10 t ha⁻¹, T₁₄ – recommended dose of fertilizer. All the plots were applied with recommended of dose of fertilizers 275:62.5:150 of N, P₂O₅ and K₂O kg ha⁻¹. The highest cane yield of 169.74 t ha⁻¹ was obtained with T₃ received seasoned pressmud @ 25 t ha⁻¹ + enriched gypsum @ 1 t ha⁻¹ + ZnSO₄ @ 37.5 kg ha⁻¹. The highest content of post harvest nitrogen (278 kg ha⁻¹) and post harvest phosphorus (19.3 kg ha⁻¹) was maximum T₃ receiving seasoned pressmud @ 25 t ha⁻¹ + enriched gypsum @ 1 t ha⁻¹ + ZnSO₄ @ 37.5 kg ha⁻¹. The post harvest available potassium (156.4 kg ha⁻¹) was recorded in treatment T₄ (Seasoned pressmud @ 25 t ha⁻¹ + lignite fly ash @ 25 t ha⁻¹).

Key Words : Seasoned pressmud, Enriched gypsum, ZnSO₄, Lignite fly ash, Yield


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