



Research Article

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Comparison of extraction methods to assess potassium availability for rice growing soils of canal ayacut of Kurnool district

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Summary

Eighty surface soil samples were collected from rice growing areas of Kurnool district covering eleven mandals and among them thirty samples were selected for the investigation based on K status. Among the extractants tried, the relative efficiency of K releasing extractants were in the following order of $1\text{ N HNO}_3 > \text{Mehlich-3} > 0.2\text{ M NaBPh}_4 > 1\text{ N NH}_4\text{OAc} > \text{AB-DTPA} > 0.02\text{ M citric acid} > 0.01\text{M CaCl}_2 > \text{distilled water}$. Results revealed that, highest amount of K was extracted by 1 N HNO_3 and lowest by distilled water. A pot experiment by biological Neubauer's seedling technique method was conducted to assess the releasing pattern of available K with bajra, as test crop. Among the various extractants tried, 1 N HNO_3 served as a better index of available K as it is highly positively correlated with dry matter yield and uptake with the shoot K content ($r=0.353^*$).

Key words : Available K, Mehlich-3, $\text{NN NH}_4\text{OAc}$, AB- DTPA, NaBPh_4 , Neubauer's seedling technique

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