

**Research Article**

DOI : 10.15740/HAS/AJSS/11.1/67-73

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

■ P. N. SIVA PRASAD, P. KAVITHA, M. SREENIVASA CHARI AND M. SRINIVASA REDDY

Received : 15.01.2016; Revised : 23.03.2016; Accepted : 19.04.2016

**MEMBERS OF RESEARCH FORUM:**

**Corresponding author :**

**P.N. SIVA PRASAD**, Division of Soil Science and Agricultural Chemistry, Agricultural College (A.N.G.R.A.U.), MAHANANDI (A.P.) INDIA  
Email: [sivassac007@gmail.com](mailto:sivassac007@gmail.com)

**Co-authors :**

**P. KAVITHA**, Division of Soil Science and Agricultural Chemistry, Agricultural College (A.N.G.R.A.U.), MAHANANDI (A.P.) INDIA

**M. SREENIVASA CHARI**, Division of Soil Science and Agricultural Chemistry, Agricultural Research Station (A.N.G.R.A.U.), Utukur, KADAPA (A.P.) INDIA

**M. SRINIVASA REDDY**, Division of Agronomy, Agricultural College (A.N.G.R.A.U.), MAHANANDI (A.P.) INDIA

**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 N HNO<sub>3</sub> > Mehlich-3 > 0.2 M NaBPh<sub>4</sub> > 1 N NH<sub>4</sub>OAc > AB-DTPA > 0.02 M citric acid > 0.01M CaCl<sub>2</sub> > distilled water. Results revealed that, highest amount of K was extracted by 1 N HNO<sub>3</sub> 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<sub>3</sub> 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, NN NH<sub>4</sub>OAc, AB- DTPA, NaBPh<sub>4</sub>, Neubauer's seedling technique

**How to cite this article :** Prasad, P.N. Siva, Kavitha, P., Chari, M. Sreenivasa and Reddy, M. Srinivasa (2016). Comparison of extraction methods to assess potassium availability for rice growing soils of canal ayacut of Kurnool district. *Asian J. Soil Sci.*, **11** (1) : 67-73 : DOI : 10.15740/HAS/AJSS/11.1/67-73.