

Abstract

This study was designed to investigate the chemical state of potassium and Evaluation extractants for the extraction of plant available potassium in calcareous soils plain done. Purpose of the study area networks with regular sampling was divided into 301 samples. Points were determined using GPS and depth of 30-0 cm sampling was conducted. Chemical and physical properties of soil were determined in 13 soil series selected according to the measured characteristics. This Factorial experiment in completely random "with three levels, 0, 100 and 200 mg/ kg of soil potassium fertilizer was performed in triplicate. sorghum Cultivation was conducted in the Zabol univercity greenhouse. After 7 weeks the plants were harvested and plant analysis. 7 extracting (strontium chloride 0/002 M, citric acid 0/05 M, hydrochloric acid 0/1 M, sulfuric acid 0/025 M, Mehlic1, strontium chloride 0/002 M + citric acid 0/05 M and distilled water) soil testing was also used and Results of this study indicated that all 7 extracting are used have a high correlation coefficient together, the correlation between extractants sulfuric acid with hydrochloric acid and strontium chloride + citric acid is the best and the according to Plant characteristics measured by the correlation between crops with K extracted by the extractor extracting strontium chloride highest correlation with the relative performance of the plant and can be used as a suitable extracting and a soil test to determine the sorghum available K in soils Sistan plain.

Key words: Potassium usable, chemical extractants, sorghum, plain



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**Evaluating chemical extractants to estimate plant
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