

RESEARCH ARTICLE

Influence of saline and sodic irrigation water on *Bajra-II* : Effect on concentration and uptake of nutrient

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SUMMARY

A pot experiment was conducted at Net House, Department of Agricultural Chemistry and Soil Science Junagadh Agricultural University, Junagadh to assess the different levels of saline and sodic irrigation water on content and uptake of nutrient by bajra during the summer-2020. The treatment consist of four levels for each of salinity (2, 4, 6 and 8 dS m⁻¹) and sodicity (5.0, 10.0, 15.0 and 20.0 SAR) of irrigation water on *Bajra* by adopting factorial CRD with three replications. The results indicated that application of different levels of saline and sodic irrigation water produced significant effect on concentration and uptake of N, P and K by grain and fodder of bajra crop. The highest N, P and K content (1.11%, 0.31% and 0.60%) and uptake (225.5, 62.6 and 121.2 mg pot⁻¹) by grain and content (0.88%, 0.21% and 0.33%) and uptake (976.0, 225.8 and 362.5 mg pot⁻¹) by fodder were observed with EC 2 dS m⁻¹ level of salinity of irrigation water and the lowest content and uptake by grain were observed with EC 8 dS m⁻¹ level of salinity of irrigation water, respectively. While the highest N, P and K content (1.15%, 0.30% and 0.59%) and uptake (256.9, 67.5 and 131.4 mg pot⁻¹) by grain and content (0.98%, 0.19% and 0.34%) and uptake (1072.7, 210.6, 370.2 mg pot⁻¹) by fodder were observed with SAR-5.0 level of sodicity of irrigation water and the lowest content and uptake by grain were observed with SAR-20.0 level of sodicity of irrigation water. The interaction effect between salinity and sodicity levels of irrigation water on uptake of N by grain and fodder where found significantly the highest with C₁ × S₁ (EC-2.0 dSm⁻¹ × SAR-5.0) level of salinity and sodicity of irrigation water.

Key Words : *Bajra*, Salinity, Sodicity, Content, Uptake of macronutrient

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