

RESEARCH ARTICLE

Influence of saline and sodic irrigation water on *Bajra-I* : Effect on yield and yield attributes

■ A. Kamathker, M. A. Davara and J. V. Polara

SUMMARY

A pot experiment was conducted at Net House, Department of Agricultural Chemistry and Soil Science, Junagadh Agricultural University, Junagadh to assess four levels 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 growth, yield attributes, yield and quality of bajra crop. The maximum plant height, number of effective and total tillers per plant, germination percentage, earhead girth, grain, fodder and biological yield and harvest index were observed with EC 2 dS m⁻¹ and SAR 5.0 and the lowest with EC 8 dS m⁻¹ and SAR 20.0 of irrigation water. The quality parameters like seed index and protein content were found maximum with saline irrigation water level of EC 2 dS m⁻¹ and SAR 5.0 and the lowest with EC 8 dS m⁻¹ and SAR 20.0 of irrigation water. The interaction effect between salinity and sodicity levels of irrigation water on fodder yield, harvest index were found significantly the highest with C₁ × S₁ (EC-2.0 dSm⁻¹ × SAR-5.0) and plant height were found significantly the highest with C₂ × S₁ (EC-4.0 dSm⁻¹ × SAR-5.0) at 60, 90 DAS and at harvest.

Key Words : *Bajra*, Salinity, Sodicity, Growth, Yield and yield attributes, Quality

How to cite this article : Kamathker, A., Davara, M. A. and Polara, J. V. (2022). Influence of saline and sodic irrigation water on *Bajra-I* : Effect on yield and yield attributes. *Internat. J. Plant Sci.*, 17 (1): 12-17, DOI: 10.15740/HAS/IJPS/17.1/12-17, Copyright@ 2022:Hind Agri-Horticultural Society.

Article chronicle : Received : 22.07.2021; Revised : 04.10.2021; Accepted : 02.11.2021

MEMBERS OF THE RESEARCH FORUM

Author to be contacted :

J. V. Polara, Department of Agricultural Chemistry and Soil Science,
Junagadh Agricultural University, **Junagadh (Gujarat) India**
Email : jvpolara@jau.in

Address of the Co-authors:

A. Kamathker and M. A. Davara, Department of Agricultural
Chemistry and Soil Science, Junagadh Agricultural University, **Junagadh**
(Gujarat) India