

## Hydrological Investigations in Salt Affected Areas of Gohana Region, Haryana

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### ABSTRACT

The aim of the study was to evaluate hydrological characteristics of saline soils around Gohana Tahsil in Haryana. In the present study, field experiments were conducted to determine various soil physico-chemical properties (soil texture, color, permeability, infiltration, soil moisture characteristics, bulk density, total dissolved solids, SAR etc.) saline and non-saline soils around Gohana area.

The results have shown that saline soils are widely scattered and show variation with regard to their salinity status. The most of the area lied under silt loam category having yellowish brown color. The saturated hydraulic conductivity (Ks) measured using Lab Permeameter was found in the order of 0.091 m/d during post monsoon. The SAR of the soil generally varied from 2 to 54 during pre-monsoon period. The soil infiltration data was fitted into Kostiakov's type infiltration function ( $Y = a \times t^b$ ) which has shown a very good correlation ( $r^2 = 0.95$  to  $0.99$ ). The results would be helpful for planning and management of land and water resources of the Gohana area in order to have better crop yield and sustainability of natural resources.