EFFECT OF GROUND WATER QUALITY ON SOIL SALINITY AND CHEMICAL COMPOSITION OF MUSTARD CROP OF GHARSANA TEHSIL, DISTRICT SRIGANAGANAGAR, RAJASTHAN

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Abstract: The survey of ground water quality on soil salinity and chemical composition of mustard crop of Gharsana tehsil, district Sriganganagar, Rajasthan was undertaken to assess the quality of ground water and its effect on physico-chemical properties of soils and chemical composition of mustard. Forty ground irrigation water samples along with their corresponding forty surface (0-15 cm depths) soil and mustard plant samples were collected from different villages of Gharsana tehsil. The quality of irrigation water were analyzed for physico-chemical characteristics such as pH, ECiw, SAR, RSC and potential salinity and it was found that majority of ground waters of the study area are not suitable for irrigation purposes. The effects of quality of irrigation water on the soil salinity were determined. The results showed that all irrigated fields have high salt concentration as indicated by pH ECiw, SARiw, RSCiw and potential salinity (71.61 me/L) of ground water decreased the per cent K+ and Mg2+ content in mustard plant leaves due to relative dominance of Na+ ion resulting increased Na+ and Ca2+ content.

Keywords: Ground water quality, Salinity, Correlation, Mustard

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