



RESEARCH PAPERS IN GEOGRAPHY



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**QUALITY AND EFFICIENCY OF IRRIGATION WATER  
AND ITS EFFECT ON THE AGRICULTURAL LAND IN  
YABRIN OASIS, SAUDI ARABIA**

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## ABSTRACT

Quality and Efficiency of irrigation water and its Effect on the Agricultural Land in Yabrin oasis, Saudi Arabia.

Yabrin oasis is located in the southern portion of the eastern province of Saudi Arabia. Agricultural land in the oasis currently faces the following problems: absence of natural drainage, high water table level, high soil salinity sand dune encroachment, low efficiency of irrigation water use, and declining crop yield.

The main purpose of this paper is to assess the agroecological situation of intensified soil, and water use in yabrin oasis.

The results of this study indicate that the average field irrigation efficiency for date palm and alfalfa crops is estimated at 30% and 36% respectively. Also the result of the soil analysis indicates that soil salinity is very high in most fields. The result of the multiple regression equation indicates that there is about 70% ( $R_2 = 0,70$ ) of the variance of the soil salinity is modeled by the eight independent variables.