

ROLE OF SULFUR AND QUALITY OF IRRIGATION WATER ON SOME PROPERTIES OF CALCAREOUS SOIL AND GROWTH OF WHEAT(*Triticum aestivum*).

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ABSTRACT

The aim of the study to determine the role of sulfur and Quality of irrigation water on some properties of calcareous soil and growth of wheat .The experiment was carried out on silt Loam-calcareous soil. Plastic pots were used and sulfur was applied at four levels (0,200,400 and 600)mg.kg⁻¹ soil. Each pot was planted with 30 seeds of wheat and irrigated with three levels salinity water (fresh water (Ece 0.65 ds.m⁻¹) ground water (Ece 1.58 and 2.39 ds.m⁻¹) to bring the moisture content to the field Capacity.

The results showed areduction of bulk density and ESP while saturated hydraulic conductivity ,percent of wheat seedling emergence, plant height and 1000 grains weight were increased with increasing levels of sulfur, The level 600 mg of sulfur resulted in significant increase of hydraulic conductivity percent of wheat seedling emergence, plant height and 1000 grains weight to (1.98 cm. hour⁻¹,52%,48.84 and 29.1 gm) respectively as compared with the control which gave the lowest values (1.58 cm. hour⁻¹,39.33% 46.66cm and 25.1gm).

The bulk density, ESP and soil salinity were increased while hydraulic conductivity, the percent of wheat seedling emergence ,plant height and 1000 grains weight are decreased with the increasing salinity levels in the irrigation water.