



## IMPROVEMENT OF CANOLA SEED YIELD AND QUALITY USING SULPHUR AND IRRIGATION INTERVALS UNDER DIFFERENT IRRIGATION WATER SALINITY LEVELS

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### ABSTRACT

This investigation was conducted at Hada Elsham Experimental Research Station, King Abdul-Aziz University during 2007/2008 and 2008/2009 seasons, to study the effects of two irrigation water salinity levels (1200 mg/L and 10000 mg/L), three irrigation water intervals (3, 6 and 9 days) and three sulphur fertilizer rates (0.0, 4.0 and 6.0 t/ha) on seed yield, yield components and seed quality of canola, Pactole cv. The obtained results showed that seed yield kg/ha was significantly increased

under the 1200mg/L irrigation water and 6t/ha of sulphur more than the seed yield/ha under the effect of 1200 mg/L irrigation water with 4 t/ha sulphur or 10,000 mg/L irrigation water with 6t/ha sulphur with no significant differences between the two later treatments. Irrigation every 3 days significantly dominated over the irrigation every 6 or 9 days on seed yield and yield components. Irrigation with 10.000 mg/L salinity water significantly decreased No. of branches /plant, No. of fruit/plant and seed weight/ plant. Besides, Protein content of the seed as well as oil content increased as water salinity increased in both seasons. As sulphur fertilizer rate increased seed yield, yield components protein and oil contents of seed significantly increased, in the two studied seasons.

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