

Effect of Different Salt Concentrations and Temperatures on Seed Germination and Seedling Characters in Safflower (*Carthamus tinctorius* L.) Genotypes

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Abstract : Germination and seedling responses of seven safflower seed genotypes (Dinçer, Remzibey, Black Sun2 cultivars and A19, F4, I1, J19 lines) to different salinity concentrations (0, 5, 10, and 20 g l⁻¹) and temperatures (10 and 20 oC) evaluated in Completely Randomized Factorial Designs in Department of Field Crops of Selcuk University, Konya, Turkey. Seeds in the control (distilled water) had at 10 and 20 oC the highest germination percentage (93.88 and 94.32 %), shoot length (4.60 and 8.72 cm), root length (4.27 and 6.54 cm), shoot dry weight (22.37 mg and 25.99 mg), and root dry weight (2.22 and 2.47 mg). As the salt concentration increased, values of all characters were decreased. In this experiment, in 20 g l⁻¹ salt concentration found germination percentage (21.28 and 26.66 %), shoot (1.32 and 1.35 cm) and root length (1.04 and 1.10 cm), shoot (8.05 mg and 7.49 mg) and root dry weight (0.83 and 0.98 mg) at 10, and 20 oC.

Keywords : safflower, NaCl, temperature, shoot and root length, salt concentration

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