

عنوان مقاله:

Seed yield and some physiological traits of safflower as affected by water deficit stress

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خلاصه مقاله:

Safflower (*Carthamustinctorius* L.) is an oilseed crop adapted to drought prone arid and semi-arid environments. This study was conducted to evaluate the effects of water deficit stress on antioxidant activity, membrane stability index (MSI), leaf chlorophyll content, leaf area index (LAI) and their relationship with seed yield using 64 safflower genotypes grown under normal and water deficit stress field condition. Plants were grown under normal irrigation until branching growth stage when water deficit stress was applied to the plants. Analysis of variance showed the significant effects of genotype, water deficit and their interactions on the physiological traits that examined. Water deficit stress significantly decreased leaf area index, leaf chlorophyll content and the membrane stability index means over all 64 genotypes whereas it caused significant increase in antioxidant compounds (APX and POX). The results also revealed the positive and significant correlations between antioxidant enzyme activities with seed yield under water deficit conditions. The stress susceptibility index (SSI) identified water-deficit tolerant genotypes (Kordestan 3 and C411) that did have outstanding yield performance per se in stress environments

کلمات کلیدی:

Antioxidant, Susceptibility index, Drought

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