

STUDY OF DROUGHT TOLERANCE INDICES IN SAFFLOWER CULTIVARS (*CARTHAMUS TINCTORIUS* L.)

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ABSTRACT

This experiment was conducted to evaluate drought tolerance of different safflower genotypes as a split-plot experiment based on a complete block design with three replications. The main plot were assessed at three moisture levels, and ten different genotypes of the safflower were considered as subplots. Drought tolerance of genotypes was evaluated by quantitative indices of drought tolerance in MP, GMP, STI, SSI and TOL. Analysis of variance showed significant differences and genetic variability between cultivars for drought tolerance indices. Based on the results of correlation between drought tolerance indices and grain yield, GMP and MP indices were considered as best for the selection of tolerant genotypes under different environmental conditions. The results of cluster analysis which was based on the reaction of the seed in different environmental conditions, and the indices, could lead to separated genotypes to four groups under medium stress conditions and severe stress conditions. Classification of genotypes using cluster analysis revealed that cross between group one with group.

Key words: Safflower, Drought stress, Tolerance indices



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