

عنوان مقاله:

(Evaluation of Drought Indices in Rapeseed (*Brassica napus* L.

محل انتشار:

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خلاصه مقاله:

Rapeseed is one of the most important oil plants in the world, which due to the increase in world population and improving living standards, should increase the production and consumption of oil of this plant. It is a plant that is cultivated both in winter and spring. The use of drought tolerance indices can help us identify drought tolerant genotypes. To determine drought tolerance indices, a study was carried out with 16 autumn rapeseed genotypes. The experiment was performed on a randomized complete block design with three replications under rainfed and irrigation condition. Drought tolerance indices including MP, GMP TOL, STI and SSI were calculated using grain yield data. Measurement of cell membrane stability (CMS) using polyethylene glycol (PEG) was used as a drought tolerance test. The results of analysis of variance showed a significant difference for all indices. Stress tolerance index (STI) was the best index to identify tolerant genotypes in both stress and non-stress conditions. Estimation of STI from the average of genotypes showed that Dante (1.22) genotype has the highest value. The results of analysis of variance for CMS showed a significant difference between genotypes at the 1% level of probability and the highest value (65.52) was for ARC5 genotype and the lowest (32.08) was for SLM046 genotype. There were a significant and strong correlation between STI, MP and GMP with CMS, as a result, cell membrane stability can be introduced as a fast and inexpensive method to identify drought tolerant genotypes. Based on STI, MP, GMP, CMS and grain yield indices in both stress and non-stress conditions, cluster analysis was performed, and genotypes were divided into 4 groups

کلمات کلیدی:

Rapeseed (*Brassica napus* L.), Water stress, Cell membrane stability, PEG

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