عنوان مقاله:

Effect of drought stress on chlorophyll fluorescence and content of antioxidant enzyme superoxide dismutase enzyme (SOD) in durum wheat

محل انتشار:

سومین کنفرانس ملی تازه های سلولی مولکولی و اولین سمپوزیوم بین المللی ژنو میکس و پروتئومیکس (سال: 1396)

تعداد صفحات اصل مقاله: 1

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خلاصه مقاله:

This experiment was conducted with 7 genotypes of durum wheat originating from Iran and Azerbaijan Republic in both stressed and non-stressed conditions in Agricultural Research Station, Islamic Azad University of Ardabil in a randomized complete blocks design with 4 replications and in two years, 2010 to 2011 agricultural years. In this experiment, in addition to physiological traits, traits like leaf chlorophyll content, initial fluorescence (F0), maximum fluorescence (FM), variable fluorescence (FV), efficiency potential (FV/FM) and the amount of superoxide dismutase enzyme (SOD) had been measured. The results showed that stress tolerant varieties had higher chlorophyll content and it is increased by stress operations of amount of superoxide dismutase enzyme in varieties to overwhelming stress. In this study, genotypes Boeffi and Leucurum had stress tolerance, chlorophyll fluorescence levels as desirable, appropriate chlorophyll amount and ultimately optimized yield in stressed conditions. Also, the higher amount of superoxide dismutase enzyme (SOD) in these varieties, this represents these varieties can cope desirably with drought stress conditions Also high and meaningful correlation between chlorophyll content and yield (r = 0.67*) showed that by increasing the amount of chlorophyll, the yield rate will be increased. Finally, it was found stress tolerant and high-yield varieties had higher superoxide dismutase, as well as high amount of chlorophyll.

کلمات کلیدی:

(Chlorophyll fluorescence, drought stress, durum wheat, superoxide dismutase enzyme (SOD