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عنوان مقاله:

Phenotypic, Genotypic Correlation and Path Coefficient For Several Traits of Maize Under Watered and Water Stress

محل انتشار:

کنگره توسعه همکاری های علمی منطقه ای علوم صنایع غذایی و کشاورزی (سال: 1397)

تعداد صفحات اصل مقاله: 15

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خلاصه مقاله:

In order to determine the best selection criteria to improve the grain yield of maize for synthetic cultivar, Ibaa 5012 under watered and water stress treatment (5 and 10 days interval), an experiment was conducted in the field of Crop Science Dept. College of Agriculture-University of Baghdad, during two seasons, spring and fall in 2013, using Randomized complete block design with four replications. The genetic, phenotypic, environment and path coefficient were estimated for ear length, no. of rows, no. of grains row-1, no. of grains plant-1, grain weight, no. of ears plant-1, root weight, water use efficiency and grain yield. The results showed that the grain weight was highly positive, genetic (0.9735), phenotypic (0.9714) environment (0.9552) correlated with grain yield, and was positively correlated with other traits such as ear length (0.8445, 0.7216), no. of rows (0.8918, 0.8141), no. of grain row-1 (0.9068, 0.8554), water use efficiency (0.6867, 6452) and root weight (0.5068, 0.4369), due to high direct positive effect in the grain yield (1.0576), in spring season irrigation treatment, the correlations in the water stress treatment were the no. of grains plant-1 with the yield at the genetic, phenotypic and environment level (0.8912, 0.8966, 0.9435) respectively, due to high positive direct effect (0.7459). In fall season, irrigation treatment, the genetic, phenotypic, and environmental high and positive correlations were for trait no. of grain plant also (0.9344, 0.9179, 0.7510) respectively, and the value of positive direct effect was (0.8498). In water stress treatment, the high positive direct effect was for no. of grains plant-1 too (0.5458) due to high positive genetic, phenotypic and environment correlations with yield (0.8470, 0.8497, 0.9346) respectively, and it have high positive correlations with most other traits. It can be .conclude that the grain weight and no. of grains plant-1 best selection criteria to improve the yield of maize population

کلمات کلیدی:

maize, yield, direct effect, genetic correlation, water use efficiency

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