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# Evaluation of Two Earliness Cotton Genotypes in Three Ecological Regions

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**Abstract :** Two earliness cotton genotypes I and II, which had been developed by hybridization and backcross methods between sindise-80 as an early maturing gene parent and two other lines i.e. Red leaf and Bulgare-557 as a second parent, are subjected to different environmental conditions. The early maturing genotypes with coded names of I and II were compared with four native cotton cultivars in randomized complete block design (RCBD) with four replications in three ecological regions of Iran from 2016-2017. Two early maturing genotypes along with four native cultivars viz. Varamin, Oltan, Sahel and Arya were planted in Agricultural Research Station of Varamin, Moghan and Kashmar for evaluation. Earliness data were collected for six treatments during two years in the three regions except missing data for the second year of Kashmar. Therefore, missed data were estimated and imputed. For testing the homogeneity of error variances, each experiment at a given location or year is analyzed separately using Hartley and Bartlett’s Chi-square tests and both tests confirmed homogeneity of variance. Combined analysis of variance showed that genotypes I and II were superior in Varamin, Moghan and Kashmar regions. Earliness means and their interaction effects were compared with Duncan’s multiple range tests. Finally combined analysis of variance showed that genotypes I and II were superior in Varamin, Moghan and Kashmar regions. Earliness means and their interaction effects are compared with Duncan’s multiple range tests.

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