

## عنوان مقاله:

Evaluation and characterization of ICARDAelite germplasm of lentil

## محل انتشار:

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## خلاصه مقاله:

Food legumes are a central part of the diet for many communities around the world and lentil could be an excellent choice to provide more nutritious foods. Lentil breeding program aims to develop adapted, high yielding, biotic and abiotic tolerant varieties. The success of any breeding program is dependent on the availability of genetic materials with sufficient diversity. In order to investigate the genetic diversity in elite germplasm of lentil, a total of ۱۳۸ genotypes received from ICARDA were evaluated in research field of Seed and Plant Improvement Institute during ۲۰۱۵-۲۰۱۶ cropping season. These materials were studied in an observatory design by evaluating ۲۸ quantitative and qualitative traits according to the Bioversity international descriptor. Results indicated that the highest Shannon index belonged to ground color of testa (۱.۳۳), testa pattern (۰.۸۵) and color of testa pattern (۰.۸). The traits seed weight per plant (CV=۱۱۱.۲۳%), grain yield (CV=۸۱.۵۸%) and pod weight per plant (CV=۷۲.۵۵%) had the highest coefficient of variation. The highest ۱۰۰-seed weight and grain yield were recorded for genotypes ۱۱۸ and ۶۹, respectively. Genetic relatedness of genotypes was investigated by their pedigrees and values of genetic distance. Analysis of proximity values based on quantitative traits showed that genotypes ۶ and ۱۱۴ had the highest similarity and genotypes ۴۲ and ۱۳۰, had the highest genetic distance. The results of discriminant analysis of principal components indicated a successful classification based on quantitative traits in differentiating groups of genotypes. Totally, results indicate the presence of a valuable genetic diversity which could be used in advanced breeding programs

## کلمات کلیدی:

Gene Bank, Genetic diversity, Gene pool, Genetic Resources

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