

DIVERGENCE STUDIES IN GLADIOLUS (*GLADIOLUS HYBRIDUS* L.) GERMPLASM

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Abstract: An investigation was carried out to identify the extent of genetic divergence that exist for the flower yield and yield contributing characters of fifteen genotypes of gladiolus. Multivariate analysis was performed on field data using Mahalanobis's D^2 -statistics, Tochers method of clustering and combined analysis of variance. Analysis of variance revealed considerable differences among the genotypes for all the morphological traits studied. All the 15 genotypes of gladiolus (*Gladiolus hybridus* L.) were grouped into three clusters on the basis of the morphological diversity. Maximum intra-cluster distance was observed in cluster III (4.544) was recorded between cluster III and I. whereas the minimum average inter cluster D^2 value (3.699) was recorded between clusters III and II. The analysis of divergence indicated significant differences among parental lines for all the agro-morphological characters. On the basis of results obtained in the present investigation, it was concluded that the allelic diversity can be used for future breeding program. The traits under study are also major flower and corm yield contributing traits and are largely associated with each other. Therefore, these traits should be taken into consideration either simultaneously or alone for selecting a high yielding gladiolus genotype.

Keywords: Gladiolus, investigation, germplasm, Iridaceae

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