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Studies on genetic diversity in Gladiolus genotypes (*Gladiolus* sp.)

Amit Kanawjia[1] and S. Saravanan[2]

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ABSTRACT : The present investigation was conducted in Department of Horticulture, School of Agriculture, SHIATS, Allahabad. 20 genotypes of Gladiolus were taken to study variability and genetic divergence using Mahalanobis (1936) D^2 statistic. Genotypes were divided into five clusters in both the years. Considerable inter and intra cluster distances were found between and among the clusters. The data pertaining to contribution of each character towards genetic divergence showed that spike length (33.16%) contributed maximum, followed by number of cormels per plant (21.05%), vase life in water (17.37%), diameter of corm (8.95%), days to spike emergence (11.05%), diameter of floret (4.74%). Days to germination, number of leaves, number of shoot, number of florets, rachis length and number of corms were non-contributors. Spike length, number of cormels per plant, vase life in water, diameter of corm, days to spike emergence and diameter of floret may prove useful in Gladiolus crop improvement programme.

Key Words : Gladiolus, Genetic diversity, inter cluster, Intra cluster, Mahalanobis D^2 static.