

STUDY OF CORRELATION COEFFICIENT AND PATH COEFFICIENT ANALYSIS IN GLADIOLUS (*GLADIOLUS HYBRIDUS* HORT.)

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Abstract: Correlation coefficient and path analysis in fifteen genotypically diverse genotypes of gladiolus (*Gladiolus hybridus* Hort.) were studied at Horticultural Research Centre (HRC) of SVPUAT, Meerut, U.P. during the years 2013-14 for seventeenth important characters. Number of corms per plant showed positive and significant genotypic and phenotypic associations with diameter of corm, number of spikes per corm and flower. Path coefficient analysis provides an effective means of a critical examination of specific force action to produce a given correlation and measure the relative importance of each factor. Path results showed that maximum positive direct effect was observed for length of rachis followed by, leaf length, visibility of spike and spikes per corm and rest of the characters showed negative correlation at genotypic and phenotypic level.

Keywords: Gladiolus, Correlation, Path analysis, Flower characters

REFERENCES

- Anuradha, S.; Gowda, J. V. N. and Jayaprasad, K. V. (2000). Indirect selection criteria to increase number of florets per spike in gladiolus. *Crop Res. Hisar*. 19 (1): 67-69.
- Chopde, N.; Gonge, V.S; Patil, S. and Warade, A.D. (2012). Correlation and path analysis of growth, yield and quality traits in gladiolus. *J. Soils and Crops* 22 (2): 345-351.
- Deshraj.; Misra, R. L. and Saini, H. C. (1997). Character association and path coefficient studies in gladiolus. *J. of Orna. Hort.* 5 (1): 35-40.
- Deshraj.; Misra, R. L.; Saini, H. C. and Dohare, S. R. (1998). Correlation and path coefficient studies in gladiolus over different environments. *J. Orna Hort.* (1): 26 - 31.
- Hedge, M. V.; Passannavar, R. and Shenoy, H. (1997). Path analysis studies in gladiolus. *Advances in Agric. Res. in India.* (8): 37 - 39.
- Katwate, S. M.; Warade, S. D.; Nimbalkar, C. A. and Patil, M. T. (2002). Correlation and path analysis studies in gladiolus. *J. Maharashtra Agric. Univ.* 27 (1): 40 - 43.
- Kumar, R.;; Yadav D.S. (2005). Evaluation of Gladiolus Cultivars Under sub-tropical Hills of Meghalaya. *Journal of Ornamental Horticulture.* Volume : 8, Issue : 2
- Lepcha, B; Nautiyal, M.C; and Rao, V.K. (2007). Variability studies in gladiolus under mid hill conditions of Uttarakhand. *J of Orn Hort,* 10 (3): 169-172.
- Neeraj, Mishra, H. P. and Jha, P. 8. (2001). Correlation and path coefficient analysis in gladiolus. *J. Ornament. Hort.* 4 (2): 74 -78.
- Rashmi, Kumar, S. and Yadav, Y.C.; (2012). Correlation and Path coefficient studies in gladiolus (*Gladiolus species* L.). *Environment and Ecology* 30 (4): 1276-1279.
- Swaroop K. (2010) Morphological variation and evaluation of gladiolus Germplasm, *Indian Journal of Agricultural Sciences* 80 (8): 742-5, August.
- Vanlalruati, T. Mandal And S. Pradhan (2013). Correlation and path coefficient analysis in tuberose. *Journal of Crop and Weed,* 9(2):44-49.
- Al-Jibauri, H.A., Millar, A. and Robinson, H.F. (1958). Genetic and environmental variances in upland cotton cross of interspecific origin. *Agron. J.,* 50(10): 633-637.
- Miller, P.A., Williams, C.V., Robinson, H.F. and Comstock, R.E. (1958). Estimates of genotypic and environment variance and co-variance in upland cotton and their implication in selection. *Agron. J.,* 50(3): 126-131.
- Dewey, O.R. and Lu, K.H. (1959). A correlation and path coefficient analysis of components of crested wheat grass seed production. *Agron. J.,* 51: 515-518.

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