New Agriculturist, **27**(1) : 139–144, 2016 http://biovedjournal.org/

Studies on genetic variability and character association in *Gladiolus* sp.

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Received December 3, 2015 and Accepted March 15, 2016

ABSTRACT : The present research was conducted in the Research Farm of Horticulture Department, Sam Higginbottom Institute of Agriculture, Technology & Sciences, Allahabad. The experimental design used in the trial was randomized block design with three replications. The results revealed that most of the characters under study exhibited moderate to low phenotypic and genotypic coefficient of variation. The phenotypic coefficient of variation (PCV) was higher than the respective genotypic coefficient of variation (GCV) for all the characters studied indicating thereby high environmental influence. The highest heritability was observed in number of cormels per plant (96.42%) followed by spike length (95.93%), diameter of corm (95.29%), days to spike emergence (93.18%), days to first floret open (92.34 %). Plant height exhibited highly significant and positive correlation with florets open at a time (0.714), number of floret per spike (0.577), diameter of floret (0.686), rachis length (0.773), durability of spike (0.598), spike length (0.904), Number of florets per spike exhibited highly significant positive correlation with diameter of floret (0.707), rachis length (0.824), durability of spike (0.820), spike length (0.631). The highest positive direct effect over spike length was exerted by plant height (1.0340), number of florets per spike (0.7966) and diameter of corm (0.1026).The direct selection for these characters would be beneficial for crop improvement since most of these characters also show significant positive correlation coefficients

Key Words: *Galdiolus grandiflorous*, heritability, correlation, path analysis, spike length.