



International Journal of Current Microbiology and Applied Sciences (IJCMAS)

ISSN: 2319-7692 (Print) ISSN 2319-7706 (Online)

An International, Monthly, Online, Free Access, Peer Reviewed, Indexed, Scientific Research Journal

CERTIFICATE OF PUBLICATION

This is to certify that the following article reviewed by editorial board and published in

International Journal of Current Microbiology and Applied Sciences (IJCMAS) ISSN: 2319-7692 (Print) ISSN 2319-7706 (Online).

Int.J.Curr.Microbiol.App.Sci.2020.9.(8):3749-3754

<https://doi.org/10.20546/ijcmas.2020.908.433>

Genetic Variability, Heritability and Genetic Advance of Yield Attributing Trait in Doubled Haploid Lines of Chilli (*Capsicum annum* L.) cv., Byadgi Dabbi

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One hundred doubled haploid lines of chilli (*Capsicum annum* L.) cv., Byadgi Dabbi and three popular varieties were evaluated in Kharif-2018 for twelve traits to examine the nature of and magnitude of variability, heritability (H^2 = broad sense) and genetic advance. Analysis of variance revealed that the differences among all lines were significant for all the traits studied. Knowledge of selection effect on positive or negative changes of a character under improvement is of paramount importance for the success of any plant breeding programme and helps the selection of desirable breeding methods. Heritability and genetic advance are the important selection parameters and selection success is a reflectance of selection response. Analysis of variances for all the 12 characters studied revealed highly significant differences among the genotypes. This implies that the existence of variability among the genotypes for all the characters studied. Mere variability will not give a clear picture of the heritable portion of variability governed by genes which are actually of more importance than the total variability. Therefore, it is most important to study the variation in terms of Genotypic Co-efficient of variation (GCV) and Phenotypic Co-efficient of variation (PCV) for each of the individual characters. Dry fruit yield, number of fruits per plant, number of seeds per fruit, fruit diameter and fruit length expressed moderate amount of PCV and GCV values along with the high heritability and medium to high genetic advance. The difference between PCV and GCV was found to be narrow indicating less influence of the environment on these characters and also governed by more additive genes. High heritability coupled with high genetic advance indicated that these characters would respond well to selection indicating more possibility for improving these traits.

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Editor-in-chief

International Journal of Current Microbiology and Applied Sciences

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