

VARIABILITY STUDIES IN EGGPLANT (*SOLANUM MELONGENA* L.) FOR CHHATTISHGARH PLAINS

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Abstract: Genetic variability in terms of genotypic and phenotypic coefficient of variances, heritability, expected genetic advance and expected genetic advance as per cent of mean, correlation and path coefficient were studied for fruit yield and its attributing traits in eleven hybrids, seven parents and a commercial check (Pusa Hybrid-6) of eggplant. In general it was noted that the value of phenotypic coefficient of variation were higher than genotypic coefficient of variation. The high GCV and PCV coupled for the traits number of fruits per plant per picking followed by average fruit weight, total number of fruits per plant, number of primary branches per plant, marketable fruit yield per plant, average fruit girth, average fruit length, total fruit yield per plant. The highest heritability estimate was observed for average plant height, average fruit weight, total number of fruits per plant followed by days to 50% flowering, days to first picking, average fruit length, average fruit girth, number of fruits per plant per picking, total soluble solids, number of primary branches per plant, marketable fruit yield per plant and total fruit yield per plant indicating predominance of additive gene action in the expression of these traits. High genetic advance as percent of mean was observed for total number of fruits per plant, followed by number of fruits per plant per picking, average fruit weight, average fruit length, average fruit girth, marketable fruit yield per plant, average plant height, number of primary branches per plant and total fruit yield per plant. Higher heritability estimate coupled with higher genetic advance as percent of mean were observed for total number of fruit per plant, number of fruits per plant per picking, average fruit weight, average fruit length, average fruit girth, total fruit yield per plant, marketable fruit yield per plant, average plant height and number of primary branches per plant and these traits can be improved through simple selection.

Keywords: Eggplant, GCV, PCV, Heritability

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