RESEARCH ARTICLE

GENETIC STUDIES OF GENOTYPES FOR FRUIT YIELD AND ITS COMPONENT CHARACTERS IN TOMATO (*SOLANUM LYCOPERSICUM* L.)

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Received-28.04.2016, Revised-19.05.2016

Abstract: The present investigation was conducted with twenty four hybrids along with their 10 parents (6 lines and 4 testers) were subjected to study the genetic variability indicated that genetic material in the present investigation possessed variability which provides sufficient basis for selection by breeder. The accessions revealed wide variability for characters evaluated. High estimates of PCV and GCV were obtained for number of secondary branches per plant, number of clusters per plant, number of fruits per cluster, number of fruits per plant, average fruit weight, pericarp thickness and total fruit yield per plot indicated a good deal of variability in those characters signifying the effectiveness of selection of desirable types for improvement. Phenotypic variances were higher than their respective genotypic variances thus revealing the role of environmental factors. High heritability assisted with high genetic advance as per cent of mean was observed for number of secondary branches per plant, number of fruits per plant, number of clusters per plant, average fruit weight (kg), pericarp thickness (mm), total fruit yield per plot (kg). Hence, simple selection based on phenotypic performance of these traits would be more effective.

Keywords: Genetic variability, Heritability, Genetic advance, F1 generation, Tomato

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