

Estimation of genetic divergence among indigenous and exotic accessions of tomato (*Solanum lycopersicum* L.)

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Thirty genotypes of tomato, both indigenous and exotic were tested for the presence of diversity on the basis eighteen yield and quality traits. Mahalanobis's D^2 analysis was employed to estimate the distances between and within the clusters formed from the test genotypes. Ten clusters were formed using Tocher's method. Cluster I, III and X were having 16, 3 and 2 genotypes, respectively, rest of the seven clusters were solitary and having single genotype each. The highest inter-cluster distance was found between clusters IV and X whereas lowest distance was observed between cluster VI and VIII suggested a closer relationship between these clusters and low degree of diversity among the genotypes. The maximum contribution towards divergence was accounted by plant height, seed index and yield per plant (~15% each) followed by fruits per plant, juice-pulp ratio, pericarp thickness and flowers per cluster. Results also revealed that there was no association between clustering pattern and eco-geographical distribution of genotypes. On the basis of the divergence study the genotypes could be selected from the most divergent clusters for hybridization and further selection programme.

Key words : Diversity, Divergence, D^2 analysis, Tomato

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