

Genetic Divergence in Chilli (*Capsicum annuum* L.)

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ABSTRACT

Fifty seven indigenously developed genotypes selected from the exotic open pollinated hybrids of chilli (*Capsicum annuum* L.) were evaluated to study the variability and genetic divergence. Genetic diversity analysis revealed good amount of variation among the genotypes studied. D^2 values ranged between 26.15 to 508.60. Fifty seven genotypes were grouped into eighteen clusters. The cluster I was the largest containing 22 genotypes, followed by cluster X (9), cluster II (8) and cluster VII (4). The remaining clusters (III, IV, V, VI, VIII, IX, XI, XII, XIII, XIV, XV, XVI, XVII and XVIII) are monogenotypic. The first five principal components with eigen value more than one contributed 84.17 per cent of the total variability amongst 57 genotypes evaluated for 15 quantitative and qualitative traits. Through cluster analysis, the fifty seven genotypes were grouped into eight clusters and among all the clusters, cluster VI was the largest with 15 genotypes followed by cluster I with 11 genotypes and cluster III with 8 genotypes.

Key words : Chilli, Cluster Analysis, D^2 analysis, Genetic Divergence, Principal Component Analysis