Studies on Nature and Magnitude of Genetic Divergence in Bottle Gourd (*Lagenaria siceraria* Mol Standl.) using D^2 Analysis*

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ABSTRACT

An experiment was conducted to study the nature and magnitude of genetic divergence of twenty four bottle gourd genotypes obtained from NBPGR, Hyderabad along with one check variety i.e. Pusa Naveen sown in Randomized Block Design (RBD) with three replications during spring summer 2012. The genotypes were grouped into five different clusters using D^2 analysis. Cluster III possessed maximum number of genotypes (11) followed by the cluster IV (8). Maximum inter cluster distance was observed between cluster II and V and minimum between III and IV clusters. In case of intra cluster distance, the maximum distance was observed in cluster III and it was zero in solitary clusters like cluster II and V. Based on cluster mean, the genotypes of cluster II followed by cluster I recorded highest mean for yield per vine and other yield attributing traits. Selection of superior genotypes with desirable traits and with high genetic distance could be selected for hybridization programmes and recognition of best genotypes for different traits to produce new elite recombinants in bottle gourd.

Key words : Bottle gourd, Cluster, D^2 analysis, Genetic diversity.