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***RESEARCH PAPER***

# Genetic variability and divergence studies in groundnut (*Arachis hypogea* Linn.)

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**Abstract :** Sixty genotypes of groundnut (*Arachis hypogea* L.) were evaluated for the genetic variability and genetic diversity The magnitude of genetic co-efficient of variation (GCV), phenotypic co-efficient of variation (PCV), heritability and genetic advance as percentage of mean were recorded high for various characters like pod yield per plant, hundred seed mass, harvest index, plant height and shelling per cent. High broad sense heritability estimates were recorded for most of traits *viz.*, hundred seed mass, days to maturity, shelling per cent, pod yield per plant, harvest index, protein per cent indicating that these traits were less influenced by the environment. $D^2$ analysis indicated existence of wider genetic variability in the population of sixty genotypes which were grouped in twelve clusters, based on their inter clusters distance. The maximum inter-cluster distance (D = 7.044) was found between cluster III and X carrying one and two genotypes from each cluster, respectively followed by that between V and X (D = 6.447) and cluster III and XII (D = 5.943). The minimum inter cluster distance was observed between cluster VII and XI (D = 2.770). The intra-cluster distance (D) ranged from 1.909 to 2.863, the maximum being in cluster V (2.863). The minimum intra-cluster distance (D) was found in cluster II (1.909) which includes eight genotypes. Cluster III showed high genetic divergence with cluster X followed by cluster V.

**Key Words :** Groundnut, Heritability, Genetic divergence, Variability

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