

**GENETIC DIVERSITY ANALYSIS OF YIELD, MORPHOLOGICAL,  
PHYSIOLOGICAL AND BIOCHEMICAL ATTRIBUTES IN PIGEONPEA  
(CAJANUS CAJAN (L.) MILLSP.)**

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**Abstract:** A set of 50 pigeonpea genotypes were evaluated during *kharif* season 2019-20 at Regional Agricultural Research Station (RARS), Tirupati, Andhra Pradesh to assess the genetic diversity among genotypes for all yield, physiological, leaf morphological and biochemical attributing characters. D<sup>2</sup> analysis grouped 50 genotypes into 6 clusters. Cluster II was largest consisting of 29 genotypes, followed by Cluster I containing 13 genotypes, Clusters III and IV had 3 genotypes each and the Cluster V and VI was solitary. The inter-cluster D<sup>2</sup> values indicated that most diverse clusters were Clusters III and IV (4187.56) followed by Clusters II and IV (3686.56). The highest intra-cluster distance was observed in Cluster III (273.66) followed by cluster II (234.81). Leaf hairiness and number of pods per plant together contributed 81.63 % for divergence. To include the genotypes in the hybridization programmes for the improvement of pigeonpea, the characters with maximum contribution towards divergence and the performance of genotypes should be considered.

**Keywords:** Cluster analysis, Genetic diversity, Pigeonpea

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