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Genetic diversity in cluster bean [*Cyamopsis tetragonoloba* (L.) Taub]

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ABSTRACT : Fifty genotypes of cluster bean [*Cyamopsis tetragonoloba* (L.) Taub] with a broad spectrum of variation were assessed for genetic divergence using Mahalanobis D2 technique. The genetic material exhibited wide range of genetic divergence for all the 16 characters investigated. All the genotypes were grouped into ten different clusters. Among the ten clusters it was observed that cluster X had the maximum of 11 accessions followed by cluster V, IV, III, VIII, IX, and II, which had 10, 7, 5, 4, 4, 3, accessions, respectively. Cluster I, VI, and VII exhibited two accessions each in a cluster. The intra and inter cluster distance revealed that the lowest mean intra cluster distance of 27.53 was exhibited by cluster I, while the highest intra cluster distance was recorded by the cluster IX (235.85). It was followed by cluster X with a distance of (233.67). The highest inter cluster distance of 374.88 was recorded between cluster II and VIII, followed by 366.77 between clusters II and VII, whereas the clusters I and VI were the least divergent (94.82) followed by clusters I and III showing a distance of 140.59 between them. On the basis of inter – cluster distances and *per se* performances observed, the genotypes with specific characters can be utilized for hybridization programme.

KEY WORDS : Cluster bean, Genetic divergence, Mahalanobis D^2 technique

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