

## Genetic diversity analysis in germplasm lines of *Rabi* sorghum [*Sorghum bicolor* (L.) Moench] based on quantitative traits

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### SUMMARY

Genetic divergence in 121 germplasm lines of *Rabi* sorghum was assessed using Mahalanobis  $D^2$  analysis. All the genotypes were grouped into 13 clusters where, cluster-I was the largest with 68 genotypes followed by cluster-XIII with 38 genotypes. Whereas, cluster-II, to cluster-XII consisted of two genotypes in each clusters. The intra cluster distance was maximum in cluster-XIII and cluster-I followed by cluster-XII and cluster-XI whereas inter cluster distance was maximum between cluster-X and cluster-XI. The genotypes in clusters-VI showed high mean values for most of the characters studied. Grain yield per plant contributed maximum to divergence followed by 1000 grain weight, panicle length, plant height and days to 50 per cent flowering, these traits can be utilized for future crop improvement programme.

**Key Words :** Genetic diversity, Inter-cluster, Intra-cluster,  $D^2$  analysis, Sorghum

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