Genetic Divergence for Grain Yield in Early and Mid- Early Duration of Rice Genotypes

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ABSTRACT

Genetic divergence of sixty three rice genotypes of rice was studied for thirteen quantitative characters of different duration groups *viz*., early and mid early duration. Genetic divergence was estimated using Mahalanobis's statistics (D^2) and principal component analysis. Cluster analysis revealed 63 genotypes were grouped into 8 clusters. The lines chosen from the same ecogeographic region were found scattered in different clusters which indicated that genetic diversity and geographic distribution were not necessarily related. The intercluster distances were higher than the intra-cluster distance reflecting wider genetic diversity among the genotypes of different groups. The highest inter-cluster distance was observed between cluster I & VIII where as the highest intra-cluster distance was found in the cluster VIII indicated that the highly divergent types existed in these clusters. Spikelets per panicle was found to be the maximum contributors towards the total divergence. The genotypes from these clusters may be used as potential donors for future hybridization programme to develop early rice variety with good grain yield.

Key words : Genetic divergence, Cluster analysis, Transgressive segregants