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Genetic divergence study in traditional local landraces of rice (*Oryza sativa* L.) predominant in Bastar Plateau Zone of Chhattisgarh

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ABSTRACT : 100 local landraces of rice from Bastar plateau of Chhattisgarh state along with five check varieties were studied for genetic diversity on the basis of nineteen quantitative characters using Euclidian distance between genotypes. This analysis allowed the 105 genotypes of rice to be identified into ten distinct clusters. Among the different clusters, cluster III contained maximum of 46 genotypes and cluster I, II and X contained a minimum of 1 genotype each. Cluster I was characterized by highest mean value for number of effective tillers per hill, spikelet fertility and grain length breadth ratio. Cluster VII had highest mean value for harvest index. The cluster VIII was characterized by highest mean value for flag leaf length, panicle length, number of fertile spikelets per panicle and total number of grains per panicle. The cluster IX was characterized by highest mean value for grain yield per plant, days to 50 per cent flowering, days to maturity, plant height, test weight and grain breadth. The highest inter cluster distance was observed between cluster II and VIII while the lowest between III and IX. The lowest intra cluster distance was observed in cluster I, II and X while highest intra cluster distance was observed in cluster IX. There is good scope to bring about genetic improvement in rice through hybridization and selection by crossing accessions from different clusters.

KEY WORDS : Genetic divergence, Euclidian distance, Cluster analysis, Rice landraces

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