

Studies on Genetic Variability, Heritability and Genetic Advance for Grain Yield and its Components in Medium Duration Rice Genotypes

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ABSTRACT

Genetic based information of different traits plays important role in varietal improvement of rice. A field experiment was conducted using twenty six medium duration rice genotypes at the Agricultural college farm, Bapatla with respect to the yield components to study genetic variability, heritability and genetic advance (GA) for yield and yield associated traits in rice. The analysis of variance showed highly significant differences among the genotypes for all the characters studied, indicating the presence of adequate variability. Further, coefficient of variation studies indicated that the estimates of GCV were lesser than the corresponding PCV values for all the traits indicating the influence of environment on expression of these characters and therefore phenotypic selection will be misleading. High PCV and GCV were recorded for grains per panicle and grain yield per plant indicating the existence of high variability. High heritability along with high expected genetic advance as per cent of mean was observed for test weight implying that this trait was under probable control of additive gene effect and simple selection is sufficient to improve these traits.

Keywords: *Expected genetic advance, GCV, Heritability, PCV, Rice and Variability.*