

Genetic variability and association studies in rice (*Oryza sativa* L.)

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ABSTRACT

The study aims to study genetic variability and correlation among yield and yield-related traits in land races of rice. High heritability estimates coupled with high genetic advance was recorded for plant height, ear bearing tillers per plant, number of filled grains per panicle and test weight indicating that direct selection of these characters based on phenotypic expression using a simple selection procedure for yield improvement would be more accurate. The results of correlation and path coefficient analysis revealed that the traits *viz.*, days to 50% flowering, number of filled grains per panicle and test weight exhibited positive association along with high positive direct effects both at genotypic and phenotypic levels. Hence direct selection for these traits will simultaneously improve grain yield per plant.

Keywords: *Correlation, Genetic variability, Genetic advance, Rice and Path coefficient analysis.*