

# **Selection Strategy for Improvement of Yield and Quality Through Genetic Variability Parameters and Trait Association Studies in Rice (*Oryza Sativa* L.)**

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## **ABSTRACT**

Thirty two genotypes of rice were evaluated for fourteen quantitative characters to assess the genetic variability and character association among themselves. Genotypic and phenotypic coefficients of variation were high for plant height and harvest index. High heritability accompanied by high genetic advance for days to 50 % flowering, days to maturity, number of effective tillers per plant, plant height, number of grains per panicle, harvest index, kernel L/B ratio, 1000-grain weight and grain yield per plant indicated the predominance of additive gene action for the expression of these characters. Grain yield per plant was found to be positively and significantly correlated with harvest index, number of grains per panicle, panicle length, days to maturity, days to 50 % flowering and plant height. Path analysis revealed high positive direct effects of days to maturity and harvest index on the grain yield per plant, indicating the possibility of yield improvement through direct selection of these traits.

**Key words** :Correlation, Path analysis, Rice, Variability.