

## **Variability and correlation among yield and yield component traits in rice (*Oryza sativa* L.)**

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### **ABSTRACT**

Investigation was carried out to study the genetic variability and correlation among yield and yield component traits with forty-eight rice genotypes at Regional Agricultural Research Station, Maruteru, West Godavari. A high phenotypic coefficient of variation compared to the genotypic coefficient of variation was observed for all the traits studied which indicates the influence of environment in the expression of the trait. High heritability coupled with high genetic advance as per cent of the mean was recorded for traits like test weight, grain yield/plant and number of filled grains/panicle indicating the predominance of additive gene action. Hence, direct phenotypic selection may be fruitful for the improvement of these traits. Correlation studies revealed grain yield/plant positively correlated with number of ear bearing tillers/m<sup>2</sup>, number of filled grains/panicle, panicle length and test weight. Positive direct effect was exhibited by the trait's days to maturity, number of filled grains/panicle, number of ear bearing tillers/m<sup>2</sup> and test weight. Hence, direct selection for these traits would simultaneously improve the grain yield/plant.

**Keywords:** *Correlation, Genetic advance, Heritability, Path Analysis, Rice and Variability*