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RESEARCH ARTICLE

Genetic studies in upland rice (*Oryza sativa* L.)

■ S.R. SHINDE, KAMLESH KUMAR AND R.M. PAWAR

SUMMARY

Studies on genetic variability, character association and path co-efficient analysis were conducted on 40 rice genotypes. Analysis of variance revealed considerable variability among the genotypes for all the characters. A high genotypic and phenotypic co-efficient of variation was observed for grain yield per plant, straw yield per plant, productive tillers per plant, spikelets per panicle, harvest index, 1000 grain weight, number of panicles per running meter, spikelet fertility, plant height, days to 50 per cent flowering and panicle length. Spikelets per panicle showed the highest broad sense heritability (95.81%). Grain yield per plant showed high value of heritability coupled with low genetic advance. The genotypic correlations among the yield traits and their path co-efficient were estimated. The grain yield per plant showed significant positive correlation with harvest index, 1000 grain weight, straw yield per plant, plant height and productive tillers per plant. The traits days to maturity, plant height, straw yield per plant and harvest index had moderate to high positive direct effect on grain yield per plant. The study revealed that genetic improvement of grain yield in rice is admissible by selecting characters having high positive correlation and positive direct effect.

Key Words : *Oryza sativa*, Heritability, Genetic advance, Correlation, Path co-efficient

How to cite this article : Shinde, S.R., Kumar, Kamlesh and Pawar, R.M. (2015). Genetic studies in upland rice (*Oryza sativa* L.). *Internat. J. Plant Sci.*, 10 (1): 33-37.

Article chronicle : Received : 19.06.2014; Revised : 14.11.2014; Accepted : 28.11.2014

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