

ESTIMATION OF GENETIC VARIABILITY AND CORRELATION ANALYSIS IN FIELD PEA (*PISUM SATIVUM* L.) GENOTYPES

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Abstract: An experiment was undertaken to study genetic variability and correlation analysis in 20 genotypes of pea (*Pisum sativum* L.) on the experimental field at Department of Genetics and Plant Breeding, Rajasthan College of Agriculture during Rabi, 2014. The genotypes were tested under irrigation condition in randomized block design with three replications. Analysis of variance revealed significant differences for six characters studied among the genotypes. The *per se* mean performance of various genotypes exhibited wide range of variation for most of the traits studied. According to mean performance of various traits viz. seed yield per plant, days to maturity and pod per plant, seed per pod was found superior for selection. The highest genotypic coefficient of variation was observed primary branches per plant followed by seed yield per plant, pod per plant, and seed per pod. Heritability estimates (broad sense) were found to be high for days to maturity followed by yield per plant, seed per pod, and pod per plant. High expected genetic advance coupled with high heritability estimates were recorded for seed yield per plant and days to maturity. The both genotypic and phenotypic levels for pod per plant and seed per pod were significantly correlated with seed yield/plant., Heritability coupled with high genetic advance and correlation also useful tool in predicting the effect in selection of best genotypes for future hybridization in yield improvement programme of pea.

Keyword: GCV, PCV, Heritability, Genetic advance, Correlation

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