

Genetic Variability, Heritability and Genetic Advance for Kernel Yield and its Components in Maize (*Zea Mays* L.) Inbreds

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ABSTRACT

Fifty maize inbred lines were evaluated for genetic potential and variability. Analysis of variance indicated significant differences among 50 genotypes for all the characters studied. The genotypic coefficients of variation for all the characters studied were lesser than the phenotypic coefficients of variation indicating the influence of environment on expression of these traits. High PCV and GCV were recorded for kernel yield per plant and kernels per row while moderate PCV and GCV were recorded for test weight, cob length, plant height and kernel rows per cob indicating that there is considerable amount of variability for majority of the characters studied. The estimates of high heritability coupled with low genetic advance as per cent of mean were recorded by days to 50% tasseling and days to 50% silking indicating the operation of both additive and non-additive gene actions. Days to maturity exhibited moderate heritability and low genetic advance as per cent of mean indicating the predominance of non additive gene action in controlling this trait. While the remaining six traits *viz.*, plant height, cob length, kernal rows per cob, kernels per row, test weight and kernel yield per plant recorded high heritability and high genetic advance as per cent of mean indicating the predominance of additive gene action and hence direct phenotypic selection is useful with respect to these traits.

Keywords: *Genitic advance, Genotypic coefficients of variation, Heritability, Phenotypic coefficients of variation.*