

RESEARCH ARTICLE

Studies on correlation and path co-efficient analysis of single cross hybrids in sweet corn

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SUMMARY

A total of 42 experimental hybrids generated by diallel mating design using 7 inbred lines of sweet corn were evaluated with parents and checks during *Kharif* 2019 at University of Agricultural Sciences, Dharwad. Green ear yield revealed a significant correlation in the positive direction with plant height, ear height, ear length, ear girth, number of kernel rows, and number of kernels per row at both genotypic and phenotypic levels, while a negative correlation was observed with days to 50% silking and Turcicum Leaf Blight. The highest value of correlation co-efficient for green ear yield was observed with green ear yield without husk, followed by the number of kernels per row and ear girth. However, there is no significant correlation between green ear yield and Total Soluble Solids. The genotypic correlation was found to be higher than the phenotypic correlation indicating high heritability of traits. Ear girth, ear height and the number of kernels per row displayed the highest positive direct effects on yield at the genotypic level and also manifested significantly positive indirect effects via plant height, ear height, green ear weight without husk, green fodder weight and the number of kernels per row. These three traits were likewise shown to have the most positive correlation with green ear yield. As a result, these attributes can be considered while selecting sweet corn genotypes for higher green ear yield.

Key Words : Correlation, Path co-efficient, Sweet corn

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