

عنوان مقاله:

Generation Mean Analysis to Estimate Genetic Parameters for Different Traits in Two Crosses of Corn Inbred Lines at Three Planting Densities

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خلاصه مقاله:

The choice of an efficient breeding procedure depends to a large extent on knowledge of the genetic system controlling the character to be selected. The objective of this study was to determine genetic parameters for yield and other traits including some of the yield components under three planting densities, using analysis of generation means (P_1 , P_2 , F_1 , F_2 , BC_1 and BC_2) derived from crosses of BY_3 with Mo_1Y and $KY_4/1$ inbred lines of corn. Analysis of variance reinforced the hypothesis that interaction of plant density on generation means depends on evaluating genotypes and the kind of trait. Generation mean analysis suggested that both additive and dominance effects were important for most of the traits evaluated in this study, but dominance had a more pronounced effect. Epistasis affected the expression of nine traits in both crosses at three planting densities. Expression of epistasis and genetic parameters differed in the two crosses and were influenced by plant density. Plant densities interacted more strongly with epistasis gene action than with additive or dominance gene action in both crosses.

کلمات کلیدی:

heritability, Additive, Dominance, Epistasis, Gene action, maize, Variance components

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