

ASSESSMENTS OF GENETIC DIVERGENCE IN RECOMBINANT INBRED LINES FROM CROSS OF *G. HIRSUTUM* X *G. BARBADENSE* COTTON

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ABSTRACT

Genetic diversity in 190 derivatives of F₉ generation of cross between *G. hirsutum* var. DS-28 and *G. barbadense* var. SBYF-425 assessed using Mahalanobis D^2 statistics, indicated presence of considerable diversity. The genotypes were grouped into three clusters based on plant morphological, yield and yield contributing characters and 85 genotypes formed ten clusters based on fibre quality traits. The contribution of various characters towards the expression of genetic divergence indicated that seed cotton yield per ha (kg) contributed highest (92.19 %) followed by plant height (6.81%) and ginning outturn (0.71%) whereas, among the 85 recombinant inbred lines 2.5% span length contributed to 45.85 % followed by uniformity ratio (42.44%) and fibre strength (11.29%) based on fibre quality traits.

KEYWORDS: Cotton, Genetic Diversity, Recombinant Inbred Lines, D^2 Analysis, Fibre

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