

HETEROSIS AND COMBINING ABILITY STUDIES IN GOSSYPIMUM HIRSUTUM L

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ABSTRACT

A 6 X 6 complete diallel experiment was conducted to estimate GCA, SCA, reciprocal effects and magnitude of heterosis and heterobeltiosis for Height of the main stem, Number of bolls per plant, Boll weight and yield of seed cotton per plant. Mean squares for GCA were highly significant for all traits. While the mean squares for SCA and reciprocals were also highly significant with the exception of plant height and Boll number where SCA and reciprocals were non significant, respectively. Appreciable amount of heterotic and heterobeltiotic effects were observed in all the characters studied.

INTRODUCTION

The success of Plant Breeding Programme aiming at production of high yielding cotton cultivars depends upon the identification and selection of vital commendable parents to be utilized in any hybridization programme. Such studies are listed in the literature for example, Thomson (1971), Chahal and Singh (1975) Ansingkar et al. (1980), Duhoon and Singh (1983), Khajjidoni et al. (1984), Khan et al. (1985), and Shahani and Chang (1985), have studied heterosis and combining ability of various cotton varieties. Other cotton breeders like Azhar et al. (1985) and Mahmood et al. (1987) reported additional evidence of heterosis for yield and yield components in cotton. In the present studies an endeavour was made to estimate the magnitude of heterosis and combining ability for yield of seed cotton and its components.