Combining Ability Estimates for Yield and Fibre Quality Traits in Line X Tester Crosses of Cotton

B Rajanna, J S V Samba Murthy, M Lal Ahamed and V Srinivasa Rao Department of Genetics and Plant Breeding, Agricultural College, Bapatla 522101, A P

ABSTRACT

Combining ability analysis using line × tester design was conducted during *kharif* 2009-10 on 54 hybrids produced by crossing 9 lines and 6 testers. The perusal of results on estimates of *gca* effects RCR 2 among lines while, RCRC 4 and RCRC 5 among testers were detected as good general combiners. It was found that all the characters studied were controlled predominantly by non-additive gene action. Out of 54 crosses, seven crosses exhibited significant positive *sca* effects and among them RCR 5 X RCRC 5, RCR 2 X RCRC 4 and RCR 136 X RCRC 5 were found to be better based on their *per se* performance and positive *sca* effects for seed cotton yield per plant.

Key words : Cotton, Line × tester Analysis, General and Specific Combining Ability