

Combining Ability Studies Involving New Hirsutum Lines in Cotton (*Gossypium hirsutum* L.)

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ABSTRACT

Combining ability analysis using line \times tester design was conducted during *kharif* 2008-09 on 48 hybrids produced by crossing 8 lines and 6 testers. Among lines, RAH 22 and RAH 44 while, tester RAH 143 showed positively significant *gca* effects for seed cotton yield plant⁻¹ and six yield contributing characters. All the characters studied were controlled predominantly by non-additive gene action. Among the cross combinations RAH 63 \times RAH 141, RAH 44 \times RAH 141, RAH 15 \times RAH 183, RAH 24 \times RAH 162, RAH 24 \times RAH 183 and RAH 52 \times RAH 143 exhibited higher *per se* performance and significant positive *sca* effects for seed cotton yield plant⁻¹.

Key words : Cotton, Line \times Tester Analysis, General and Specific Combining Ability