Combining Ability Analysis for Seed Cotton Yield and Fibre Quality in Inter-specific Hybrids of Cotton (*G. hirsutum* L. x *G. barbadense* L.)

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ABSTRACT

Combining ability analysis using line × tester design was conducted on 54 hybrids developed by crossing 6 lines and 9 testers. Based on estimates of *gca* effects, ACH 703 E in lines and RHCB 001 among testers were detected as good general combiners. It was found that monopodia per plant, syonpodia per plant, number of bolls per plant, 2.5% span length, fibre elongation and seed cotton yield per plant were predominantly controlled by additive gene action. Among the cross combinations, 0892 B X CCB 5 was found to be better based on their *per se* performance and positive *sca* effects for seed cotton yield per plant. For good fibre quality parameters CNH 120 MB X DB 11 was better.

Key words : Cotton, General and Specific Combining Ability, Inter-specific Crosses, Line × Tester Analysis