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Study on combining ability in okra [*Abelmoschus esculentus* (L.) Moench]

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ABSTRACT : Combining ability effects were estimated for 8 characters *viz.*, days to first flowering, plant height, number of branches per plant, fruit length, fruit girth, number of fruits per plant, fruit weight and fruit yield per plant through line x tester analysis comprising 21 hybrids produced by crossing 7 lines and 3 testers. Parents and hybrids differed significantly for GCA and SCA effects, respectively. The combining ability variance showed higher magnitude of SCA variance for all the characters indicating preponderance of non-additive (dominance) gene action. On the basis of GCA effects across nine characters, the genotype Sivagangai Local (L_2) was the best combiner for number of fruits per plant and fruit yield per plant followed by Pudukottai Local (L_1) and Arka Anamika (T_2) among testers were found to be good combiners for fruit yield per plant. Hence, these parents may be used as one of the parent in okra hybrid programme. The hybrid ($L_4 \times T_2$) Karaikudi Local x Arka Anamika was found to be most promising for fruit yield per plant on the basis of *per se* performance and SCA effect followed by ($L_2 \times T_3$) Sivagangai Local x Punjab Padmini. The crosses showing high specific combining ability effects and *per se* performance for fruit yield per plant suggesting that these hybrids may be exploit in further breeding programme.

KEY WORDS : Line x tester, GCA, SCA, Okra

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