

General and specific combining ability studies in brinjal

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SUMMARY

24 F_1 hybrids developed by crossing 6 lines and 4 tester in line x tester design were subjected to combining ability analysis for yield and other characters. Both additive and non additive gene actions were observed for all the characters. Among the ten parents, the general good combiners were Arka sheel and Arka shirish. These parents also had high gca effects for average fruit weight, fruit length, number of fruits per clusters, number of leaves, number of branches at one month after transplanting, plant height at final harvest and seedling height at transplanting. In 24 crosses (Arka sheel x Green round and Arka sheel x Kudachi A) having positive x positive gca effects reveals that the high sca effects in these crosses was mainly through additive gene effects. Therefore, the best option for improvement is the identification of transgressive segregants based on sca effects which may lead to isolation of promising lines of high total yield in brinjal.

Key Words : Brinjal, Combining ability, gca, sca effects

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