

# Combining ability analysis for growth and yield components in brinjal (*Solanum melongena* L.)

SANTOSH CHOUDHARY AND R.P. DIDEL

Department of Plant Pathology, Sri Karan Narendra College of Agriculture (SKRAU), Jobner, JAIPUR (RAJASTHAN) INDIA

Combining ability studies on growth and yield components were conducted from  $10 \times 10$  half diallel cross of brinjal. The analysis of variance for combining ability selected revealed that mean squares due to GCA and SCA variance were significant for all the characters which indicated that all the characters were controlled by both additive and non-additive gene effects. However, the  $\sigma_{gca}^2 / \sigma_{sca}^2$  ratio being less than unity for all the characters except fruit diameter and plant height indicating that the non-additive gene action was more important in the inheritance. Among the parents, based on fruit yield DBSR-91, followed by DBR-31 were found to be best general combiners, DBSR-91 was found to be best general combiner over all the characters. DBR-31 was found to have desirable GCA effects only for plant height, crude protein content besides fruit yield. Pusa Purple Round x Pusa Kranti followed by DBR-31 x Pusa Kranti, HLB-12 x DBR-31, Hisar Shyamal x Pusa Purple Round and HLB-25 x DBSR-91 were the best crosses based on SCA effects of fruit yield.

**Key words :** Brinjal, Combining ability, Gene effects

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