



## Combining Ability of Early Segregating Generation RGR F<sub>4</sub> Lines of Heteroticbox in Cotton

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**Abstract:** Present study was designed for evaluation of combining ability of different quantitative characters in early segregating generation *i.e.* F<sub>4</sub> lines derived from exploitation of heterotic box in cotton. Ten F<sub>4</sub> lines were selected and crossed with four testers resulting in forty derived hybrids. All the forty derived hybrids, their parents and checks were evaluated in randomized block design. Parents were found to be significantly different for most of the characters studied except number of monopodia plant<sup>-1</sup>, boll weight, ginning outturn and lint index in the analysis of variance. Analysis of variance for combining ability showed that MSS due to lines and testers were significant for seed cotton yield and lint yield. SCA variance was greater than GCA variance for all characters studied except for seed cotton yield and lint yield. RGR F<sub>4</sub>5 line recorded significant positive *gca* effect for important yield attributing characters studied except for number of bolls/plant, boll weight, sympodial length at 50 per cent height, ginning outturn, seed index and lint index. Hybrid RGR F<sub>4</sub> 1 × DR 8 had positively significant *sca* effect for sympodial length at 50 per cent height, seed cotton yield, lint yield and seed index.

**Keywords:** Cotton, Combining ability, GCA effect and SCA effect

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