

# **BREEDING BEHAVIOUR AND ASSOCIATION ANALYSIS FOR YIELD AND YIELD COMPONENTS IN LINSEED (*Linum usitatissimum* L.)**

By

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## **ABSTRACT**

The present investigation was initiated during *rabi* 2000-01, at Research farm of Indira Gandhi Agricultural University, Raipur (C.G.) to generate the broad genetic pool of linseed (*Linum usitatissimum* L.), by including exotic parents to enlarge the gene pool in crossing programme and to understand the genetic architecture of developed material through diallel cross analysis. A 7 x 7 diallel, excluding reciprocals, was attempted during *rabi* 2000-2001 involving linseed genotypes namely, Kiran, R 552, LCK 88062, Polf 14, Polf 22, T 397 and SIKO 10. Half of seeds of F<sub>1</sub>s along with parents were grown to advance the generation (F<sub>2</sub>s) during 2001-02 in Randomised Complete Block Design with four replications, in Experiment number I, then in year 2002-03, parents along with F<sub>1</sub>s and F<sub>2</sub>s were grown in Experiment II to study the diallel cross analysis.

The findings of present investigation revealed that both additive and non additive components were equally important for the expression of seed yield and its attributes. Hence, a suitable breeding procedure such as combination breeding, for accumulation of desirable genes would be practiced to improve the seed yield. High heterobeltiosis coupled with high sca effect for seed yield per plant was observed in crosses "LCK 88062 x Polf 14", "R 552 x Polf 14", "LCK 88062 x Polf 22" and "Polf 22 x SIKO 10" exhibiting the possibilities to initiate the heterosis breeding programme. The scheme of intermating in F<sub>2</sub> and onward generation may be advantageous to avoid rapid fixation of alleles by inbreeding.

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**Chairman of the Advisory Committee**