

## RESEARCH ARTICLE

# Genetic analysis of yield and yield components in soybean [*Glycine max*(L.) Merrill]

■ S.R. SHINDE, J.V. PATIL AND R.M. PAWAR

### SUMMARY

The present investigation including nine generations of four crosses was undertaken to study the genetics of yield and yield components through generation mean analysis. Additive, dominance and epistasis interactions were found operating in control of almost all characters. Dominance gene action was found predominant in inheritance of yield and yield contributing characters like number of primary branches, clusters per plant and 100 seed weight indicating conventional selection procedure may not be effective enough for improvement of these characters, therefore, selections should be postponed in later generations or intermating among the selected segregants followed by one or two generations of selfing could be useful to break the undesirable linkage and allow to accumulate favourable alleles. Both additive and non-additive gene effects were involved in the expression of plant height, number of pods, oil per cent, protein per cent, and days for maturity. Reciprocal recurrent selection or bi-parental mating design should be used to improve these characters.

**Key Words :** Soybean, Gene action, Additive, Non-additive gene effects, Epistasis

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