

RESEARCH ARTICLE

Combining ability analysis for yield and its components in bread wheat (*Triticum aestivum* L. em. Thell.) over environments

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SUMMARY

Combining ability was analyzed using a half diallel of ten parents in bread wheat (*Triticum aestivum* L. em. Thell.). Combining ability analysis, revealed the importance of both additive as well as non-additive genetic variances for control of various traits. However, the ratio of $\sigma^2_{GCA}/\sigma^2_{SCA}$ revealed preponderance of non-additive gene actions in almost all the traits. Parents Raj 4120 were the good general combiners, whereas crosses Raj4120 x WH1021 and Raj4120 x DBW17 were found to be best specific combiners for grain yield per plant and some of the yield contributing traits. However, on the basis of per se performance and significant SCA effects for grain yield per plant and some of its important components, hybrids DBW621 x WH1021, DBW17 x DBW621 and Raj 4238 x PBW343 were considered to be most promising for further exploitation in breeding programmes.

Key Words : Wheat, General combining ability, Specific combining ability

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