

ESTIMATES OF GENERAL AND SPECIFIC COMBINING ABILITY FOR SOME MORPHO-GENETIC CHARACTERS IN SPRING WHEAT

M. Aslam Chowdhry, Ch. Asghar Ali and Malik Tanwir Ahmad.
Department of Plant Breeding & Genetics,
University of Agriculture, Faisalabad.

Received 14-09-89

Accepted 31-03-90

ABSTRACT

The present research work under study was planned to comprehend the genetic nature of the quantitative traits in diallel cross of five wheat varieties namely LU26S, Chakwal 86, Punjab 85, Punjab 81 and Lyallpur 73. Variances due to general, specific combining ability and reciprocal effect were significant for grain weight per spike and grain yield per plant while for number of spikelets per spike and number of grains per spikelet, general combining ability effects were significant whereas specific combining ability and reciprocal effects were non-significant.

INTRODUCTION

The concept of general and specific combining ability in connection with the diallel system, developed by Griffing (1956), provides a viable technique to study the nature of combining ability in quantitatively inherited traits.

Study of combining ability is valuable in classifying the parental lines in terms of their hybrid performance. These informations are useful in assessing the nicking ability of the parents and thus aids in selecting parents which when crossed give rise to more desirable segregates. This in turn helps in choosing the parents for hybridization programme. Combining ability analysis techniques proposed by Griffing (1956) has already been used in wheat to achieve the aforesaid objectives by Ahmad *et al.* (1984), Bhatti *et al.* (1984), Qari *et al.* (1984), Guseinova (1985), and Maloo (1987) etc.

The present studies were initiated to determine the best