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COMBINING ABILITY STUDIES FOR GROWTH AND YIELD CHARACTERS IN RIDGE GOURD (*LUFFA ACUTANGULA* (L) ROXB)

K. MUTHAIAH[1], V. D. GASTI[2], SANGANAMONI MALLESH[3]
SUMALATHA AKKALAREDDY[4] & ARINDAM DAS[5]

[1,5]ICAR-Division of Vegetable Crops, Indian Institute of Horticultural Research, Hessaraghatta, Bengaluru, Karnataka, India

[2]Department of Vegetable Science, Kittur Rani Channamma College of Horticulture, Arabhavi, University of Horticultural Sciences, Bagalkot, Karnataka, India

[3]Department of Vegetable Science, College of Horticulture, University of Horticultural Sciences, Bagalkot, Karnataka, India

[4]Department of Horticulture, College of Agriculture, G.B. Pant University of Agriculture and Technology, Pantnagar, Uttarakhand, India

ABSTRACT

The investigation was carried out to get the information on combining ability in ridge gourd. Eight different parental lines were selected; they were mated in half diallel fashion. Twenty eight crosses were developed. Among parents and crosses, significant variations due to GCA and SCA were observed for growth and yield traits, which indicates the predominance of additive and non additive gene action and which suggested that ample scope for direct selection or heterosis breeding. Out of eight parents, DMRG-25, DMRG-36 and DMRG-22 were found to be best general combiners. The crosses DMRG-25 × DMRG-1 (0.29) and DMRG-25 x Arka Sumeet (0.29) exhibited the high SCA effect for fruit yield per vine and for fruit length. The next cross, as per fruit yield per vine is found in the cross DMRG-36 × Arka Sumeet (0.25) and followed by DMRG-22 × DMRG-15 (0.23). Performance of selected hybrids with respect to total yield is attributed by significant standard heterosis in the desired direction.

KEYWORDS: Combining Ability, Yield, Growth, Parents and Crosses