

Combining ability analysis of yield and yield components in tomato

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ABSTRACT : The nature of the inheritance of days to flower initiation, plant height at maturity, primary branches per plant, days to first ripening, number of fruits per plant, reproductive period, number of locules per fruit, fruit size, number of seeds per fruit and fruit yield per plant was studied from a-10 parent half diallel cross of *Lycopersicon esculentum* Mill. Due to their high general combining ability effects, Pusa Sheetal, Pant T-3, Pant T-4 and Labonita parents were suggested for future hybridization programmes. The best specific crosses for fruit yield was PED X Labonita, PED X Anand T-1, Pusa Sheetal X Anand T-1, Pusa Sheetal X Roma, Navodaya X Pusa 120 and Pant T-3 X Pusa 120. A population improvement method in the form of diallel selective mating could be used for the exploitation of additive and non-additive gene actions for these characters.

Key Words : Combining ability, tomato, yield, yield components.