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Heterosis for yield and yield components in tomato

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ABSTRACT : A study was conducted in tomato using an 10x10 diallel set excluding reciprocals to quantify the magnitude of heterosis for yield and its components: 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. Highly significant differences were observed among the genotypes for almost all the studied traits. Highly significant heterosis of desired nature was found for days to flower initiation (28.6 and 21.1), plant height at maturity (–17.3 and –16.01), primary branches per plant (43.4 and 29.7), days to first ripening (–2.7 and –4.2), number of fruits per plant (44.7 and 32.9), number of locules per fruit (50.7 and 20.4), fruit size (21.9 and 13.5), number of seeds per fruits (30.9 and 22.5) and fruit yield per plant (22.4 and 22.5) over the better and mid parents respectively.

Key Words: Heterosis, genotypes, better parent, mid parent, tomato.