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Genetic variability, heritability and genetic advance in tomato [*Solanum lycopersicon* (Mill.) Wettsd]

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ABSTRACT : Genetic variability is the backbone of plant breeding on which selection acts to evolve superior genotypes. In this context, ten lines with four testers were crossed in a line × tester mating design to estimate the variability, heritability and genetic advance for yield and its component traits in tomato. Analysis of variance revealed significant differences for all the traits studied. The estimates of GCV, PCV, heritability (broad sense) along with high genetic advance was observed for number of fruits per plant, early yield per plant and total yield per plant indicating thereby presence of large amount of variability and additive gene action for expression of these traits. Hence, selection for these traits will be effective however, for other traits hybridization followed by selecting desirable transgressive segregants will be better options for genetic improvement of tomato.

KEY WORDS : GCV, Genetic advance, Heritability, PCV, Tomato

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