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Triple test cross analysis for yield and yield traits in tomato (*Lycopersicon esculentum* Miller)

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ABSTRACT : The modified triple test-cross analysis was applied to estimate additive (D), dominance (H) and epistatic component of genetic variance for ten quantitative traits of tomato. Three testers, BT-17 and PS-1 and there hybrid (BT-17 x PS-1) were crossed to 15 inbred lines to develop the experimental material. Overall epistasis was important for days to flowering, number of flower/cluster and number of fruit/cluster. Significant estimate of both additive and dominance component were observed for all the characters, except number of branches per plant, number of fruit per cluster, fruit set per cent and number of fruit per plant for additive and plant height, number of branches per plant, number of fruit per cluster, fruit set per cent and number of fruit per plant for dominant component. The F value was positive and significant for number of branches per plant, number of fruit per cluster, number of fruit per plant and fruit size showing is odirectional nature of dominance. Significant of additive components and F parameter showing increasing effect on the characters, indicates that pedidree selection would be effective for improvement of such traits.

KEY **W**ORDS : Modified triple test-cross, Additive, Dominance, Epistatic

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