

Evaluation of advanced breeding lines for yield and yield related components and resistance to okra yellow vein mosaic virus (OYVMV) disease in okra

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SUMMARY

Sixty four entries consisting of fifty seven inbred lines and seven checks (four hybrids and three commercial varieties) were evaluated for yield and yield related components and screened for reaction to okra yellow vein mosaic virus in three replications of Partial balanced lattice design (triple lattice) under unprotected conditions during summer 2011. High genotypic and phenotypic co-efficients of variation were noticed for disease incidence followed by number of primary branches per plant and fruit yield per hectare indicating maximum variability among the different genotypes. High estimates of heritability coupled with high genetic advance obtained for fruit yield per plant indicating presence of additive gene effects which indicated the effectiveness of selection for these traits. Presence of high heritability coupled with low genetic advance for average fruit weight, plant height and fruit diameter revealed that straight selection has limited scope for further improving these traits. The results exhibited that four lines were highly resistant to yellow vein mosaic virus, ten lines showed moderate resistant, 26 lines tolerant, 10 lines moderate susceptible, 6 susceptible and one highly susceptible. The highest yield per hectare was found in the DBh-25 (21.98 t/ha) followed by DBh-33 (19.9 t/ha) and DBh-7 (19.54 t/ha).

Key Words : Resistance, Tolerant, Okra yellow vein mosaic virus, Genetic advance, Heritability

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