

RESEARCH ARTICLE

Genetic variability and correlation studies in brinjal (*Solanum melongena* L.)

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SUMMARY

The present investigation was carried out in the Department of Horticulture, Faculty of Agriculture, Annamalai University, during the period 2014 - 2015 to assess the extent of genetic variability, heritability, correlation and path co-efficient analysis of 60 genotypes of brinjal for yield and shoot and fruit borer tolerance. The experiment was laid out in Randomized Block Design with three replications. From the analysis of data, it can be concluded that the maximum phenotypic and genotypic variation was noted for fruit yield per plant (67.94 and 67.27%) followed by fruit weight (50.70 and 50.41%), fruit girth (30.72 and 29.88%), number of fruits per plant (29.99 and 29.79%) followed by shoot and fruit borer incidence (21.59 and 21.37%). High heritability along with high estimates of GCV, genetic advance and genetic gain was observed for fruit yield per plant, fruit weight, number of secondary branches per plant and shoot and fruit borer incidence. Among the sixteen morphological characters studied, number of long styled flowers per plant (8.803), number of short styled flowers per plant (5.403), number of fruits per plant (3.099), fruit weight (0.757), days to first harvesting (0.133) and shoot and fruit borer incidence (0.082) showed positive direct effect in path co-efficient analysis. Positive correlation was recorded for fruit weight (0.885), fruit girth (0.644) and number of fruits per plant (0.622).

Key Words : Brinjal, Variability, Heritability, Correlation, Path analysis, Shoot, Fruit borer tolerance

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