

## GENETIC ANALYSIS OF YIELD AND ITS CONTRIBUTING TRAITS IN BRINJAL (*SOLANUM MELONGENA* L.)

Muktar Ahmad and Manoj Kumar Singh\*

<sup>1</sup>C. S. Azad university of Agriculture and Technology Kanpur U.P

<sup>2</sup>Krishi Vigyan Kendra, Pampoli – 790102, East Kameng, Arunachal Pradesh

Email : [mr.mksingh2008@rediffmail.com](mailto:mr.mksingh2008@rediffmail.com)

Received-17.12.2014, Revised-04.01.2015

**Abstract:** The estimated value of additive genetic component ( $\hat{D}$ ) was significant for all characters- days to flowering, height of plant, number of branches per plant, length of leaf, width of leaf, length of fruit, width of fruit, number of fruit per plant, width of fruit, number of fruit per plant, weight of fruit and fruit yield per plant. The value of ( $\hat{H}_1$ ) was observed higher than the ( $\hat{H}_2$ ) and additive genetic component ( $\hat{D}$ ) for all the traits. The estimates of dominant component ( $\hat{H}_2$ ) was also higher than additive genetic component ( $\hat{D}$ ) for all the traits except width of fruit. The estimated value of ( $\hat{h}^2$ ) was found positive and significant all the characters except four characters plant height, number of branches per plant, length of fruit and fruit yield per plant. The estimated value of ( $\hat{F}$ ) was found to be positive and significant for all the characters except for days to flowering number of branch per plant, length of leaf, length of fruit, and width of fruit. The estimated value of ( $\hat{E}$ ) was found to be non significant for all the characters except of dominance ( $\hat{H}_1/\hat{D}$ )<sup>0.5</sup> reflected over dominance for all the characters. The computed ratio of  $\hat{h}_2/\hat{H}_2$  being less than unity for all characters except days to flowering, length of leaf, width of leaf, width of fruit.

**Keywords :** Brinjal, Yield, Genetic analysis

### REFERENCES

- Chadha, M.L. and Sharma, C.M.** (1991). A note on partitioning of genetic variation in brinjal. *Haryana J. Hort. Sci.*, **20** (1-2): 152-155.
- Goto, K.** (1953). Genetic studies on eggplant II. The heritability of some quantitative characters and estimation of minimum number of genes. *Genetics*, **2b**: 445-452.
- Robinson, H.F.; Comstock, R.E. and Harvey, P.H.** (1955). Genetic variance in open pollinated varieties of corn. *Genet.*, **26** (1) : 171-187.
- Salimath, S.B.** (1981). Diallel analysis of yield and yield components in brinjal (*Solanum melongena* L.) *Thesis Abstract (1981) 7 : (1) : 2-3*
- Shull, G.H.** (1914). The genotype of maize A.M. *Nat.*, **45** : 234.
- Singh, D.K. and Gautam, N.C.** (1991). Genetics of quantitative traits in brinjal (*Solanum melongena* L.). *Veg. Sci.* **18**(2):177-183.

\*Corresponding Author