

Studies on variability in certain intervarietal crosses of okra [*Abelmoschus esculentus* (L.) Moench]

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SUMMARY

A field experiment was conducted to study the genetic variability, heritability and genetic advance of seven characters namely, days of first flower, plant height, number of nodes per plant, number of fruits per plant, fruit length, single fruit weight and fruit yield per plant in the segregating generations of crosses Arka Anamika x MDU 1 and Parbhani Kranti x MDU 1. For fruit yield per plant in all the crosses, the variability in F_2 generation in general were high when compared to F_3 generation. High PCV and GCV were observed in all three crosses for number of nodes per plant, number of fruits per plant and single fruit weight. The traits single fruit weight and fruit yield per plant showed high heritability along with high genetic advance in all the crosses which indicated that is might be due to the predominance of additive gene effects.

Key Words : PCV, GCV, H^2 , GA, Okra

How to cite this article : Pachiyappan, R. and Saravanan, K. (2013). Studies on variability in certain intervarietal crosses of okra [*Abelmoschus esculentus* (L.) Moench]. *Internat. J. Plant Sci.*, **8** (1) : 67-69.

Article chronicle : Received : 28.07.2012; Revised : 27.08.2012; Accepted : 24.10.2012

Okra [*Abelmoschus esculentus* (L.) Moench] is a common vegetable crop valued for its good source of iodine, calcium, iron and vitamins. Vegetable productions is quite inadequate to meet the daily requirement of Indian diet. Genetic variability helps to desirable genotypes. The genetic variation and genetic gain obtained by selection are studied by predicting the heritability and genetic advance.

MATERIALS AND METHODS

The five generations namely P_1 , P_2 , F_1 , F_2 and F_3 of three crosses namely Arka Anamika x Parbhani Kranti, Arka Anamika x MDU 1 and Parbhani Kranti x MDU 1 were raised in RBD, replicated thrice during December 2004. A spacing of 45 cm between rows and 30 cm between plants was followed. 5 plants

in P_1 , P_2 and F_1 generations, 200 plants in F_2 and F_3 generation were observed for all the three crosses in each replication. The standard procedure of analysis of GCV and PCV and heritable components for the experimental design were adopted to detect genetic differences among segregations generations.

RESULTS AND DISCUSSION

The experimental findings obtained from the present study have been discussed in following heads:

PCV and GCV :

The progress in economic characters depends on the magnitude and nature of their genotypic variability. The biological variations occurring in this crop offer great scope for genetic improvement through selection. Padda *et al.* (1970), Chandra *et al.* (1996); Saravanan (2001) and Senthil Kumar (2003) have reported existence of wide range of variation in Okra cultivars. The current interest in Okra improvement is towards the development of superior varieties for yield and related quantitative characters of polygenic inheritance. The potentiality of cross is measured not only be mean performance but also on the extent of variability.

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