

## Genetic variability studies in F<sub>2</sub> generation of okra [*Abelmoschus esculentus* (L.) Moench]

MAHESH MEENA, E. GANGAPPA, K. MALLIKARJUN, T. BASAVARAJA, M. ASIF, K.T. VENKATESHA, N.M. BASAVAPRABHU AND K.V. VIJAYAKUMAR

### SUMMARY

Studies were conducted on genetic variability for ten quantitative characters in F<sub>2</sub> generation of three crosses in okra. The genotypic and phenotypic co-efficients of variations were moderate to high for all the characters except ridges per plant with reference to F<sub>2</sub> generation of the crosses C-II and C-III; whereas the F<sub>2</sub> of C-I showed moderate to high PCV and GCV for all the traits except fruit diameter and fruits per plant. High broad sense heritability coupled with high genetic advance as per cent of mean was recorded for fruit length and primary branches in C-II and C-III and for fruit length followed by nodes per plant in C-I which indicated lower environmental influence on these traits and the prevalence of additive genes. Simple and early selection schemes would be effective for the improvement of these traits.

**Key Words :** Okra, Genetic variability, Genetic advance, Heritability

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Okra [*Abelmoschus esculentus* (L.) Moench.] 2n=130 which is also known as gumbo, lady's finger and bhendi is an annual, often cross pollinated crop of the family Malvaceae. Okra is normally cultivated during summer and rainy seasons and is specially valued for its tender and delicious fruits. It is an important vegetable crop of the tropics and subtropics of the world and has found its place in India since time immemorial.. Its average nutritive value is higher than tomato, egg plant and most of the cucurbits. It is an excellent source of iodine besides other minerals and

vitamins. All forms of plant improvement activities through breeding contemplate an eventual boost in genetic potential for yield. Since yield is polygenically controlled and highly influenced by environment, selection based on yield alone is not effective. The breeder while selecting for high yield has to select indirectly through yield associated and highly heritable characters after eliminating Environmental components of phenotypic variance. An attempt to improve a character by selection would be futile unless a major portion of variation is of genotypic and quantitative assessment of the population for yield and its contributing characters is necessary. Study of different variability parameter provides a strong basis for selection of desirable genotype for augmentation of yield and other agronomical attributes. Such study estimates the feasibility of using available genetic resources for effective improvement. The present study was therefore undertaken to determine the genetic variability for fruit yield and its attributes.

### MATERIALS AND METHODS

The experimental material in the present study consisted five contrasting parents lines viz., Pusa sawani, Arka Anamika

#### MEMBERS OF THE RESEARCH FORUM

K. MALLIKARJUN, Department of Genetics and Plant Breeding, University of Agricultural Sciences, G.K.V.K., BENGALURU (KARNATAKA) INDIA

Email: malligpb@gmail.com

#### Address of the Co-authors:

MAHESH MEENA, E. GANGAPPA, T. BASAVARAJA AND M. ASIF, Department of Genetics and Plant Breeding, University of Agricultural Sciences, G.K.V.K., BENGALURU (KARNATAKA) INDIA

K.T. VENKATESHA, N.M. BASAVAPRABHU AND K.V. VIJAYAKUMAR, Department of Genetics and Plant Breeding, G.K.V.K., University of Agricultural Sciences, BENGALURU (KARNATAKA) INDIA