

STUDY ON GENETIC VARIABILITY, HERITABILITY AND GENETIC ADVANCE FOR YIELD AND YIELD ATTRIBUTING CHARACTERS IN CLUSTER BEAN [*CYAMOPSIS TETRAGONOLOBA* (L.) TAUB.]

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ABSTRACT

An experiment was carried out on cluster bean to find out the study on genotypic variability, heritability and genetic advance expressed as percentage of mean for yield and yield attributing characters in thirty genotypes of cluster bean collected from different sources and maintained at the Horticulture Research Farm of the Department of Applied Plant Science (Horticulture), Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh, India. The research findings showed wide range of variability for plant height (55.69-109.02 cm), pod yield per plant (79.24-122.17 g), number of pods/plant (41.07-76.73), number of clusters/plant (7.00-31.13), pod yield (120.29-143.50 q/ha) and number of pods/cluster (2.93-21.47). The genotypic and phenotypic variances were high for days to maturity (43.11-43.22) and germination percent (40.92-41.71). Heritability was high for number of pods/cluster (97.50 %) and number of clusters/plant (95.30 %), whereas, it was lowest for pod width (26.80 cm), high heritability combined with high genetic advance expressed as percentage of mean for number of pods/cluster (125.15 %), number of clusters/plant (84.44 %) and number of reproductive branches/plant (31.72 %). The characters like- number of pods/cluster, number of clusters/plant, number of reproductive branches/plant, plant height (cm) and pod yield/plot (kg), showed high genotypic coefficient of variation as well as high phenotypic coefficient of variation with genetic advance, indicating there by that selections based on phenotypic performance could be effective for improvement of these characters.

KEYWORDS: Cluster bean, genetic variability, correlation coefficient, path analysis, GCV, PCV and genetic advance