ASSET Series A (2003) 3 (4): 81-89

ASSET
An International Journal

GENETIC VARIABILITY AND HERITABILITY OF SEED YIELD COMPONENTS IN WEST AFRICAN OKRA (*ABELMOSCHUS CAILLEI* [A. CHEV] STEVELS)

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ABSTRACT

Components of genetic variation, heritability and genetic advance were evaluated in seven accessions of West Africa Okra. (*Abelmoschus caillei* {A Chev} Stevels). Crosses among these accessions were carried out to produce F_1 F_2 BC_1 and BC_2. Field experiment was laid out in a randomized complete block design with two replications. Data were collected on seed yield components. The results indicated that the additive gene predominates the inheritance of these characters. Dominant gene effects were low in magnitude, unidirectional positive increasing alleles (hundred seed weight, pod length and, seeds per pod) and ambidirectional (positive increasing and negative decreasing alleles) for ridges per pod, seeds per ridge pod width and seed weight. Partial dominance, approximately complete dominance and over-dominance situation moderate the inheritance of these characters. A high additive gene estimates, narrow sense heritability and genetic advance indicated that selection in the early generations for these characters could be effective. Possibilities of developing pure lines and hybrids were found in the crosses for pod and seed yield.

Keywords: West African Okra, heritability, dominance, variability.