

Genetic studies on seed yield of West African okra [*Abelmoschus caillei* (A. Chev.) Stevels]

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Abstract

West African okra is an under-exploited vegetable crop with high pod and seed yield potentials. F1 hybrids of eight accessions of West African okra were composited to produce F2 seeds and backcross generations. Field evaluation of six generations (P1, P2, F1, F2, BC1, and BC2) from five crosses was carried out in a randomized complete block design with three replications. The A, B, and C scaling tests were not significant for 100 seed weight, while significant A, B, or C scaling test for seed yield per plant was recorded. Additive gene effects [d] appeared to have contributed immensely to the inheritance of both characters. However, a non-significant interaction (i, j, l) for 100 seed weight corroborates with the results of individual A, B, and C scaling tests. A duplicate epistasis (Acc5 x Acc4) implied difficulty in evolving improved varieties. Estimates of genetic effects confirmed the preponderance of additive gene effects for 100 seed weight and seed yield per plant. High narrow sense heritability and genetic advance indicate the possibility of substantial improvement in seed yield.