

**Abstract:**

Nine genotypes of roselle (karkade) were evaluated at Shambat for two consecutive seasons (1990/91 and 1991/92) in a randomized complete block design with four replicates. The variance components, genotypic coefficients of variability, broad sense heritability and genetic advance were estimated for thirteen characters. Great variability was detected among the genotypes for most of the characters. In addition, the studied characters showed differences in the estimates of phenotypic, genotypic and environmental variances between the two seasons. The highest genotypic coefficient of variation and genetic advance were recorded for calyx weight/capsule in both seasons, and the lowest for days to 50% flowering in the first season and pH in the second one. High estimates of heritability (above 90%), in both seasons, were recorded for calyx length, calyx diameter, calyx weight/capsule and capsule diameter. Low estimates (below 50%) were obtained for days to 50% flowering in the first season and number of internodes/plant in the second season. The highest genetic advance, as a percentage of the mean, was given by calyx weight/capsule and calyx yield/plant, while the lowest value was shown by days to 50% flowering.