ABSTRACT

Quantitative yield performance of pumpkin (Cucurbita moschata (Lam.) Poir.) accessions was evaluated for two seasons in 2012 and 2013. Accessions were planted on-station in KALRO Kakamega and Embu farms at a spacing of 2 m x 2 m in a replicated Completely Randomised Design. Analysis of variance indicated significant variations among accessions in all yield parameters. The number of female and male flowers ranged from 1-10 and 11-197, respectively. Fruits per accession ranged from 1-9. Accession KK-40 produced 9 fruits. Average fruit weight was 4.2 kg in NY-130 and 0.2 kg in NY-77. Total fruit weight was between 0.2 kg and 15.9 kg for NY-77 and KK-40, respectively. Kakamega trials were yielded highest in most characters, except 100-seed weight, which was 14.2 g and 12.5 g in Embu and Kakamega, respectively. The yield parameters were subjected to phenotypic, genotypic, environmental, phenotypic coefficient, genotypic coefficient, heritability, genetic advance and correlation analysis. The highest GCV and PCV resulted in fruit number and total weight per accession, respectively. PCV was higher than GCV for all yield parameters, meaning that the variations were not only due to genotype, but also due to environment. The high heritability and high genetic advance of seed number and 100-seed weight indicates that effective selection can be based on these characters. The high GCV, PCV, heritability and genetic advance values can be applied to select and isolate high yielding accessions for improvement into commercial cultivars.