

Abstract:

Field experiments were conducted at Rahad Research Station for three consecutive seasons (1994/95, 1995/96 and 1996/97) to investigate the response of three new sorghum varieties (Ingaz, Tabat and Faterita Wad Ahmed) to intra-row spacing, rate of N-fertilizer and their interactions. The effects of main treatments on yield were significant, but their interactions were not. Therefore, cultural recommendations based on one of the three varieties are not appropriate. Irrespective of the variety used, intra-row spacing of 20 cm with two plants per hill (125 000 plants/ha) and N application at 86 kg N/ha (2N) gave the highest yield. Harvest index, being the major component of productivity scores and a measure of crop efficiency, could be used as a selection criterion for new genotypes varying in these attributes.