Abstract:

Five seed rates, viz. 2.5, 5.0, 7.50, 10.0 and 12.5 kg/fed., and two mechanical harvesting methods, viz. direct combining and windrow combining, were evaluated under rainfed conditions over two successive seasons (1992/93 and 1993/94) at the Sudanese Canadian Project (Sim Sim), 160 kilometers south of Gedarif, using a split-plot design with five replications. Data were collected on six plant parameters; namely, height of first pod from ground, height of plant at harvest, number of pods per plant, number of branches per plant, number of seeds per pod, 100-seed weight and grain yield/fed. Crop (yield) losses, including gathering and total discharge losses due to natural lodging or machine action, were determined. With the exception of 100-seed weight and number of seeds/pod, all plant parameters and grain yield/fed. were significantly affected by seed rates. Crop (yield) losses, however, tended to decrease with increasing seed rate, but they were still within the acceptable limit except for gathering losses due to windrow combining. Maximum grain yield was obtained at 10.0 kg/fed. seed rate.