

Abstract:

An experiment was carried out at Sim Sim Centre for the Development of Rainfed Agriculture, Gedarif State, eastern Sudan. The objectives were (i) to compare the performance of a Claas combine harvester having three rubber bats (conventional reel) with a locally modified paddle reel sunflower combine harvester and (ii) to investigate the effect of three levels of seed moisture content and three forward speeds of the combine on the different types of harvest losses. The results indicated that 10%-12% seed moisture content was the best range to start combine harvesting of sunflower. The paddle reel header was more efficient in reducing harvest losses than the conventional reel. The forward speed significantly ($P = 0.01$) affected the harvest losses, and the losses were generally increased as forward speed increased. The pre-harvest and the header losses were the highest harvest losses, and they increased as the seed moisture content decreased.