

**Abstract:**

This study was carried out at ICRISAT, under artificial stem borer infestation, with the following objectives: (1) to study the yield performance of some Sudanese sorghum lines selected for recovery resistance to *C. partellus*, by relating yield reduction to the extent of damage, and (2) to investigate the effect of season, i.e. post-rainy and rainy, on yield reduction due to attack by the stem borer. Eight sorghum lines were planted under rainy and post-rainy season conditions. The trials were laid as a split plot with three replications and three infestation levels (zero or no infestation, main stem infestation and main stem with tiller infestation). Under the post-rainy season conditions, when temperature was low, yield reduction was independent of dead-heart caused by the borer, whereas in the rainy season the effect of dead-heart formation on grain yield was pronounced. It is concluded that genotype, season and level of infestation have a role in modifying this relationship..