

Field Screening of Sorghum Genotypes against Shoot fly

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ABSTRACT

The present experiment was conducted to evaluate 30 sorghum genotypes including two resistant checks against shoot fly under unprotected and protected conditions at the Agricultural College Farm, Bapatla during *kharif* 2017-18. Infestation in the form of dead hearts caused by shoot fly ranged from 2.54 to 35.56% and 0.00 to 8.14% under unprotected and protected conditions respectively. Biophysical characters *viz.*, trichomes and leaf glossiness responsible for resistance were also studied under both unprotected and protected conditions and the data revealed that the highest number of trichomes of adaxial surfaces and abaxial surface were recorded in the highly resistant genotypes R-68 and Mahalakshmi, whereas lowest number in susceptible genotype 4993 when compared to the resistant checks IS 2205 and IS 18551. The genotypes R-68, Mahalakshmi and I 33 were found to be glossy in nature, while the susceptible genotypes R-91014 and 4993 were non-glossy in nature compared to resistant checks IS 2205 and IS 18551. The trichome density on adaxial and abaxial leaf surface was significantly and negatively correlated with dead hearts. With regard to the infestation of shoot fly, the genotypes I 33, Mahalakshmi and R-68 were found to be highly resistant when compared to resistant checks IS 2205 (C) and IS 18551 (C).

Keywords: *Dead hearts, Genotypes, Leaf glossiness, Shoot fly, Sorghum, Trichomes*