Muturi PW, Rubaihayo P, Mgonja M, Kyamanywa S, Sharma HC and Hash CT, 2012. Novel source of sorghum tolerance to the African stem borer, *Busseola fusca*. *African Journal of Plant Science Vol. 6(11), pp. 295-302*

ABSTRACT

Sorghum (Sorghum bicolor) is an important cereal food crop in semi-arid tropics, but its productivity is curtailed mainly by insect pests and diseases. The African stem borer, Busseola fusca Fuller (Lepidopteran: Noctuidae), is among the most injurious pests of sorghum in sub-Saharan Africa and is responsible for >15% sorghum grain yield losses. Sorghum from India with records of stem borer invasion could provide supplementary and novel resources of tolerance to this pest. Utilization of tolerant varieties in combination with other methods of control is likely to offer a sustainable strategy for B. fusca management in sorghum production. The objective of this study was to evaluate several local and exotic sorghum genotypes for tolerance to B. fusca. Genotype Swarna from India which is known to be susceptible to Chilo partellus was used as a susceptible check. There is limited information regarding tolerant/resistant sorghum to B. fusca. Seven commercial cultivars and 20 introductions from India were evaluated for B. fusca tolerance at Kabete, in central province of Kenya, during long and short rainy seasons in 2010. Selection index were based on leaf damage, dead hearts, exit holes and stem tunneling. The following genotypes named ICSA 467, ICSA 473, MACIA and ICSB 464 were found to be the most tolerant to B. fusca. These tolerant genotypes, can be used as novel sources of tolerance, and could be introgressed into the local common varieties since they are well adapted to the local environment.