

Abstract

Eastern Province is a major sorghum growing zone in Kenya. There exist different landraces of sorghum that are not yet known. The landraces continue to be maintained by cultural preferences and traditional practices by the farmers. Germplasm collection was done in the major sorghum growing agro ecological zones in eastern province of Kenya as follows; Mbeere in LM₃, LM₄; Makueni in LM₅, LM₆; Kitui in LM₃, LM₄, LM₅; and Mutomo in LM₄, LM₅. The germplasm was collected separately from 120 randomly sampled farmers. At time of collection information on traits preferred and grain use was recorded for each accession. The seed color/name, sample status, region and agro-ecological zone were used to identify the different landraces. Forty four different accessions were collected from different farmers in the region. Data was analyzed using PROC GLIMMIX model of the Statistical Analysis Systems software (SAS Institute, 2005). Parameters studied were expressed as percentages, Analysis of Variance was performed, and Least Significant Differences used for separation of means at 0.05 level of confidence. Mbeere region had the most landraces available with diverse colorations to Kitui, Mutomo and Makueni. The landraces are unique in their adaptation, food quality, grain yield, quality of harvested products, biotic stress resistance and post-harvest processing. These untapped resources could be useful in crop improvement programmes and in food security. The decline in use of the landraces may erode the genetic base and prevent use of distinctive traits in crop adaptation and improvement.