

## **Abstract**

Maize is the main staple food in Kenya and adoption rates for improved varieties is high. Smallholder farmers grow over 75% of the maize crop in Kenya. Breeders consider that some local varieties hold potential value for local adaptation and other useful traits. Many farmers in western Kenya use local maize landraces although documentation indicating genetic diversity of these maize types has not been done. The objective of this study was to assess the genetic diversity of these local maize landraces and to document the existing local seed systems of the same in four western Kenya districts. A total of 285 randomly selected farmers from four western Kenya districts were interviewed using a questionnaire. Both primary and secondary data is used. Four maize landraces were found in this region. Eighty percent and sixty five percent of farmers in Siaya and Busia districts respectively planted only these maize types, whereas Bungoma and Kakamega each had 32% and 20% respectively. These local maize types covered more than half of the total maize area in Siaya and Busia districts. The interviewees had a well defined local maize seed system. In conclusion there are four types of indigenous maize types of economic importance in western Kenya with well defined seed conservation systems. It is recommended that communities in the lower potential areas of Siaya and Busia districts be considered as sites for improved on-farm seed conservation programmes. Also, any anticipated introduction of genetically modified maize into this region should be done under carefully considered guidelines to minimize the risk of contaminating these maize types.