

Abstract

Sorghum bicolor L. is an important cereal crop grown in the semi-arid areas. It is ranked as the fifth key cereal crop worldwide. The ability of sorghum to adapt to drought, salinity, infertile soils, and high temperatures makes it a critical crop in the dry regions. However, farmers grow many landraces some of which do not perform well since the majority cannot afford nitrogenous fertilizers to boost their harvest. Therefore, a baseline survey was conducted in Eastern, Nyanza and Coastal regions to assess the production systems for sorghum. Structured questionnaires were used to gather information from a total of 76 randomly selected farmers in the study regions. Data on socio-economic characteristics, sorghum varieties, use of farm inputs, and source of seeds, farming systems, traits preference, farm sizes, yields and constraints in production of the crop was collected. Parameters studied were analyzed using Statistical Programmes for Social Sciences (SPSS) (IBM SPSS Statistics 20). Results showed that majority of respondents in Eastern (99%), 80% in Nyanza and all respondents in the coastal region cultivated landraces. Most of the respondents had farm sizes between 0.5-5 acres. A larger proportion of respondents in the three regions reported low harvests from their farms, recording below 5 bags every season. Most of the farmers across the three regions intercrop sorghum with other crops with all respondents in Eastern, 80% in Coast and 68% in Nyanza. Some farmers plant sorghum without fertilizers, others used either inorganic or organic fertilizers while the rest use both organic and inorganic. The traits desired by farmers in the region included high yields, early maturity, resistance to pest and diseases, sweetness and tolerance to drought. Farmers cited pests and diseases, weeds such as striga, and drought as the key constraints to sorghum production in the regions.