

Abstract

Finger millet is an underutilized cereal crop grown in some parts of semi-arid lands in Kenya. Its productivity could be critical in diversifying household nutrition and incomes among resource-constrained farmers in these marginalized areas. The purpose of the current study was to analyze the effect of innovations on the productivity of the crop. More knowledge could help underutilized cereal crops' practitioners to develop and disseminate better-targeted innovations. A Translog production frontier was found adequate in investigating the effects of innovations on finger millet productivity for a sample of 384 finger millet farmers in Elgeyo-Marakwet County, Kenya. The empirical results indicated that the application of improved finger millet variety and practicing conservation tillage positively affected productivity through the reduction of technical inefficiency. Finger millet yield was more responsive to the number of labour in person-days in comparison to other frontier inputs. The study also found that small farms had higher yields than large farms. The mean technical efficiency of finger millet farmers was about 67%. Income from no-farm activities and membership to the group had positives and significant effects on technical efficiencies. The age of the household head and contacts with extension officers significantly increases the inefficiencies.