

Influence of Sustainable Land Management Practices on Dairy Farming in Baringo County, Kenya

Dairy farming promotes food and nutrition security globally. Despite dairy farming being an important income source for smallholder farmers in Kenya with 80% of milk production, it is commonly faced by challenges such as land degradation and overgrazing which has threatened its sustainability. This study was conducted to assess the influence of SLM practices on dairy production. The study was conducted in Mogotio and Mumberes Wards in Mogotio and Eldama Ravine Sub-Counties respectively in Baringo County, Kenya. A cross-sectional research approach was adopted for the study. Qualitative data was collected from 257 households. Data analysis was conducted using descriptive and inferential statistics. A Multiple linear regression model was used to determine the impacts of SLM practices on milk yields. Results showed that fodder preservation ($\beta = 0.136$, $p = 0.025$) and cover crops ($\beta = 0.141$, $p = 0.054$), significantly increased milk yields by 13.6% and 14.1%, respectively. Agroforestry on the other hand had a negative effect reducing milk yield by 14.1%. Additionally, Friesian cattle ($\beta = 0.293$, $p < 0.001$) and extension support ($\beta = 0.386$, $p < 0.001$) had a positive relationship with milk yield. These results demonstrate that SLM practices have the potential to improve milk yields in arid and semi-arid areas. I recommend that the State Department of Livestock Production and dairy cooperatives enhance capacity building and provide incentives for fodder production and preservation, as well as cover cropping, strengthen access to extension services and breed improvement programs for increased milk production