

Abstract

Consumption of natural licks is common among domestic animals under natural circumstances, and as a substitute to commercial mineral licks among smallholder livestock keepers in Tharaka-Nithi County, Kenya, with a believe that animals obtain potential nutritional benefits. However, this has never been established through an experimental research using natural licks from the study area. Therefore, this study was aimed at determining feed intake, nutrient digestibility and milk production performance in dairy goats fed on natural licks. Four lactating Kenya Alpine Dairy Goats (KADG) in their second lactation stage and weighing 47.5 ± 3 kg were randomly assigned four treatment diets that consisted of three natural licks from Kang'au, Nagundu and Kabariange, and a standard commercial lick (control) in a 4 by 4 Latin square design. A basal diet of Boma Rhodes grass hay and a standard concentrate were fed to the animals, and feed intake, fecal output and milk yield were measured. One way Analysis of Variance (ANOVA) model was used for the lick intake, nutrient intake, and apparent digestibility and milk parameters. Correlation analysis was carried out to establish the relationship between natural lick sources and milk parameters. There was no significant difference on dry matter intake, nutrient intake, apparent digestibility and milk yield and quality ($P > 0.05$) among goats consuming natural licks compared to commercial lick. However, there was a positive correlation (r) with a value of 0.70 between milk production and lick intake. Natural licks can be an alternative source of mineral supplementation where commercial mineral licks are not available.