

Abstract

Diet selection is an important requirement for evaluating the effects of herbivores on their environments. Herbivores select feeds to provide nutrients required for body functions. Inadequate information on diet selection and intake hinders development of feeding and utilization strategies. The objective of this study was to determine diet selection, intake by sheep fed selected humid and semi-arid grasses at Machakos Agriculture Training Centre (ATC). Five sheep were individual housed in pens of size 3 x 3 m and fed in a cafeteria system with six grasses. Data on feed intake, feeding time and number of visits was recorded for 5 days. Selectivity Index (SI) for each grass was calculated from intake data. The grasses were analyzed for chemical composition according to AOAC (1990). Analysis of variance (ANOVA) was carried using SAS (2000) to determine the effect of grass species on diet selection. Number of visits, feeding time, and the SI were different ($P < 0.05$). Selectivity Index (SI) and Dry matter intake (DMI) had positive correlation ($P < 0.05$) and ($P < 0.0001$) respectively with number of visits ($r = 0.90$) and feeding time ($r = 0.999$). Crude fibre had negative correlation ($P < 0.05$) with invitro dry matter digestibility (IVDMD) ($r = -0.95$), SI ($r = -0.67$), number of visits ($r = -0.71$), DMI ($r = -0.69$) and feeding time ($r = -0.67$). Crude protein had positive correlation ($P < 0.05$) with IVDMD ($r = 0.24$). The result of this study indicated that diet selection can influence intake and hence performance of sheep. Diet selection studies can be used in designing feeding programmes for ruminant livestock in the tropics.