

30. EFFECTS OF CONCENTRATE AND MINERAL SUPPLEMENTATION ON GROWTH, INTAKE AND BEHAVIOUR OF TETHERED LAMBS

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A study was conducted at Sokoine University of Agriculture to investigate effects of concentrate and mineral supplementation on growth rate, intake and behaviour of tethered lambs. In Experiment 1 (January to April, 1996), 40 Black Head Persian (BHP) (20 male and 20 female) lambs 4 - 6 months of age and 7 - 19 (15 ± 0.15) kg body weight were used. Concentrate supplements were offered to provide intake of 0% (C1), 0.5% (C2), 1% (C3) and 1.5% (C4) of initial live weight either without mineral (M1) or with 10 g/day (M2) mineral supplement. Lambs were tethered for 8 hours a day (8.00 to 16.00) using 2.5m long sisal rope for each in a 3ha paddock dominated by *Brachiaria spp.* Growth rate of lambs tended to increase with level of concentrate supplementation although differences were not significant ($P > 0.05$). Growth rate was higher (71.17 ± 4.8 vs 42.86 ± 8.8 g/day) with lambs offered mineral supplements than their counterparts ($P < 0.01$). Male lambs grew faster (74.61 ± 4.67 Vs 42.17 ± 4.65 g/day) than female lambs ($P < 0.01$). Forage intake and behaviour (Experiment 2) was estimated using 16 female lambs from Experiment 1. SWC technique was used in estimating intake during tethering. Behavioural activities of tethered lambs were also observed. Lambs on C1 had higher ($P < 0.05$) intake rate than C2 and C4 (2.6 Vs 1.9 and 2.2 g/min) and higher ($P < 0.05$) forage DMI than lambs on C4 (59.0 Vs 39.8 g/kgM.d). IR and DMI were not affected by mineral supplementation. IR and DMI estimates varied within day with higher ($P < 0.01$) estimates during first hour than last hour (2.8 vs 1.7 g/min and 63 Vs 37 g/kgDM.d) of tethering respectively. Lambs spent more time on grazing (>85%) than other behavioural activities and this tended to increase with level of concentrate supplementation though the differences were small ($P > 0.05$). All results are discussed in relation to available literature. Areas of further research are suggested.

