

ABSTRACT

The effects of different mineral supplementations on the milk yield of free-ranging Somali camels were investigated in two phases in a semi-arid region of northern Kenya during the dry and wet seasons in 2002 and 2003. In phase 1, twelve (12) lactating camels were selected at random to form four (4) groups each consisting of three camels. The first group served as the control and as a result received no mineral supplementation. In addition to the control diet the other groups received oral doses of minerals as follows over a 60-day period: T1 (P), T2 (High Cu low Co) and T3 (Low Cu high Co). The daily milk yield and blood mineral profiles were measured during the wet and dry seasons. The mean daily milk yield increased from 3.4 L/d to 4.3 ± 0.3 L/d and 5.2 L/d in the dry and wet seasons, respectively. Fifteen (15) lactating camels were selected at random to form five groups each consisting of three replicates. The control group did not receive any mineral supplement. The other four groups in addition to the control diet, received the following treatments: T4 (Common Salt), T5 (High Co), T6 (High Co+P) and T7 (Low Co+P). Mineral supplement T6 produced significantly higher milk yield (5.4 ± 0.5 and 6.5 ± 0.7 L/d) during the dry and wet seasons. Both T6 and T7 had significantly higher milk yield than T4 and T5. During both phases, the blood Ca and P level significantly increased in camels receiving T1, 6 and 7. Animals that received only the trace mineral supplements had lower blood P compared to the ones receiving supplementary P and also the control. Supplementation of lactating camels with Co and P significantly ($p < 0.05$) increased milk yield). Effect of common salt, commonly given by farmers, on milk yield was insignificant. It was concluded that mineral supplementation to lactating camels was beneficial, and that mineral supplements should include P and Co. Further research is required to establish P and Co requirements of lactating camels.