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## Effect of feed flushing and steaming-up during summer season on reproductive performance in desert ewes and lamb growth, under semi-arid tropical environment

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Feed scarcity during summer months is one of the major predisposing factors for low reproductive efficiency of sheep reared in semi-arid environment in Sudan. A study was conducted to assess the effect of supplementation during summer on growth, reproductive performance desert ewes and lamb growth rate. 340 ewes were divided into four groups; the first group was used as a control, the second group supplemented with diet A, the third group with B and the fourth group with C. All ewes in the three supplemented groups were flushed and steamed-up, the control group received no supplements as in the farmer practice. Mature 18 rams introduced to the experimental ewes, sex ratio was 1:20. Body condition score (BCS) of ewes were estimated. Number of services, ewes mated; pregnant, non-pregnant, aborted and lambled were recorded. Number of lambs born and weaned was also recorded. Lambs body weight and measurements were recorded. Milk samples were collected for progesterone profile. The results showed that respective BCS for the four groups were  $2.6 \pm 0.04$ ,  $2.9 \pm 0.04$ ,  $2.9 \pm 0.04$  and  $2.8 \pm 0.05$  for A, B, C and the control groups respectively. The lowest BCS was recorded for group A ( $2.6 \pm 0.04$ ) while the control group was ( $2.8 \pm 0.05$ ), also the highest BCS was however recorded in ewes at their 5th parity ( $2.3 \pm 0.12$ ). Ewes in B, C, A had respective fertility rates of 90.7 %, 81.5% and 74.7% where ewes under farmer's practice was 53.33%. The prolificacy rate were 116.2, 109.1, 108.9 and 103.1% for diet A, B, C and the control, respectively. Diet B and A recorded lowered abortion rates and none supplemented ewes recorded highest abortion rate (15%). Dams supplemented with diet B had the highest pregnancy rate (93.81%), and the control group was 75%. The percentage of none pregnant ewes was 6.19 and 25% on control. Lambs suckling on control ewes recorded lowest weights during the experimental period. Further, the study signifies the importance of providing additional feed supplementation to ewes and lambs kept grazing under the conditions of a hot, semi-arid environment to improve their reproductive efficiency and gave heavier lambs.

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