



Tropentag, September 16-18, 2015, Berlin, Germany

“Management of land use systems for enhanced food security:
conflicts, controversies and resolutions”

Effects of Grazing Management and Watering Regimen on Sudan Desert Lambs Body Weights

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Abstract

This study utilised mature Sudan desert ewes (*Ovis aries*) at a village in Sheikan province, North Kordofan State, within the semi-desert ecological zone of Sudan. Sixty ewes were randomly assigned to grazing and watering regimen combinations in a factorial arrangement of treatment using a randomised complete design. Grazing treatments were night grazing and day grazing whereas watering was either every other day or every three days. The ewes were naturally mated using two healthy rams that were randomly circulated among ewe groups to eliminate ram effect. The ewes were flushed (receiving a concentrate supplement for 45 days at mating time); and steamed-up (receiving the supplement for 45 days pre-lambing). The objectives were to investigate the effects of breeding ewes grazing management and watering regimen on lambs' weight at birth and lambs' growth. Lambs' birth weights were not significantly ($p > 0.05$) affected by both grazing management and watering regimen of their dams. However, lambs belonging to ewes on night grazing and every other day watering regimen recorded comparatively the highest birth weights while those on day grazing and every three days watering regimen had slightly the lowest weights. Respective lamb weights at birth for the two groups were 3.7 and 3.4 kg. Final weights were significantly ($p < 0.05$) influenced by grazing management where lambs belonging to ewes on night grazing had the highest weaning weights (32.6 kg) and those belonging to ewes on day grazing recorded the lowest weaning weights (28.5 kg). No significant grazing management X watering regimen were revealed. Nonetheless, lambs belonging to ewes on night grazing and every three days watering recorded the best weights compared to lambs belonging to ewes on the other treatment combinations. Both lambs belonging to ewes on day grazing and every other day watering and those on day grazing and every three days watering had the lowest weights throughout the 12 months trial period. It was indicated that grazing management of ewes greatly influenced the growth performance of their lambs. Further research work is needed to elucidate the lamb type of birth and lamb sex on lamb growth and performance.

Keywords: Grazing management, lamb birth weight, lamb growth, Sudan desert ewes, watering regimen