Effect of feeding cactus on Barbary sheep performances

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Abstract
A three-week experiment, laid out in a randomized complete design with four sheep/treatment was conducted in sheep research center at Tripoli University, Faculty of Agriculture (Libya) in August 2010. Thirty percent of cactus (4.3% cp) replaced sheep concentrate (17.6 % cp), (2/3 to 1/3) sheep concentrate and cactus, respectively and no changes in alfalfa hay (16.8%) on a dry matter basis offered to the treatment group, however, in the control group, sheep received only alfalfa hay and sheep concentrate. Diets and water were offered in individual troughs once daily in digestive trial box. Common salt was added at 2 g/h/d individually. Feed, water consumption and refusals were recorded daily during adaptation and samples collection period, 14 and 7 days, respectively. Life body weight was taken weekly. Data were analyzed using the Gestate program (2009). Dry matter intake (DMI) of alfalfa was 935 and 881 g/h/d, while the DMI of sheep concentrate was 704 and 468 g/h/d in control and treatment group, respectively. The 30% of cactus converted to 266 g on fresh weight basis (94% H2O). Free water intake (ml/h/day) was reported at 3473 and 3290 in the control and treated groups, respectively. More over, nitrogen intake was also estimated in this study and found to be highly significant between control and treated group. Although, nitrogen excreted in feces was not significant, nitrogen excreted in urea was significant. In spite, nitrogen balance was significantly positive in treated compared to the control group, the average daily gain tended to be higher in the control compared to the treated group 160 vs. 119 g/h/d. Therefore, feeding cactus reduce the water intake by 183 ml/h/d, since cactus grown in large areas hot, dry summers and high population growth, low and unpredictable rainfall.

Key world: cactus, sheep, nitrogen

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