عنوان مقاله:

Digestibility, microbial protein synthesis, rumen and blood parameters in sheep fed diets containing hydroponic barley fodder

محل انتشار:

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خلاصه مقاله:

This experiment was conducted to determine the possibility of replacing part of the barley grain by hydroponic barley fodder (HBF), and evaluating its effect on digestibility, rumen parameters, microbial protein synthesis and blood parameters in sheep. Four male Kermani sheep, 18-month-old (34.7 ± 1 kg live weight) were randomly assigned to a change over 4 × 4 design and fed the experimental diets for 21 d; 16 d for adaptation and 5 d for sample collection. Hydroponic-grown barley fodder replaced barley grain in the experimental diets. The experimental diets were: 1) control diet (without hydroponic barley fodder), 2) diet containing 7% of hydroponic barley fodder, 3) diet containing 14% of hydroponic barley fodder and 4) diet containing 21% of hydroponic barley fodder. Results showed that dry matter intake (DMI), nitrogen intake and retention and digestibility of nutrients increased (P<0.05) by increasing the amount of hydroponic barley fodder in experimental diets. Ammonia-nitrogen production changed cubically with increasing level of HBF in the experimental diets (P<0.05). In conclusion, the increase in DMI, nutrient digestibility and nitrogen retention suggests that up to 21% of HBF may be fed to sheep. However, an economic analysis is needed before recommendation for practical use at the farm level.

کلمات کلیدی:

feed, forage, germination, grain, nutrients