ISSN 2310-4090

International Journal of Scientific Footprints Open Access

Body Weight Gain and Testicular Growth of Horro Rams Supplemented with Noug Seed Cake and Wheat Bran Mix under Grazing Management in Western Ethiopia

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Abstract

The effect of supplementation with concentrate of Noug seed cake (NSC) and Wheat bran (WB) mixture on body weight gain, body condition and testicular size of Horro rams was evaluated under grazing management at Bako Agricultural, Technical and Vocational Education and Training college, western Ethiopia. The experiment involved 18 uniform intact yearling Horro rams with average initial body weight of 18.55 ± 0.99kg (mean ± SD). Treatments consisted grazing natural pasture alone (T1;Control), or T1 supplemented with concentrate mixture at 0.9% of body weight (T2) or T1 supplemented with concentrate mixture at 1.5% of Body weight (T3). The experiment was laid out completely at random where rams were randomly allocated to three dietary treatments (six per treatment). Chemical composition of the natural pasture and supplementary feeds were analyzed using standard laboratory procedures. Data were analyzed using General Linear Model (GLM) procedure of the statistical analysis system (version SAS 9.1). Natural pasture was poor in Crude Protein (6.07%), relatively lower in In vitro digestible organic matter (54.61% of DM) and high in Acid detergent fiber (67.78%). Supplementation significantly ($P<0.05$ to $P<0.001$) increased Average daily body weight gain (ADg), final body weight gain (FBW), body condition score (BCS), and testicular traits. There was no significant ($P>0.05$) difference between T2 and T3, with respect to parameters considered, In general, since supplementation with T2 improved ADg, and testicular size in Horro rams grazing natural pasture, consistent with T3, T2 should be considered as an appropriate feeding strategy to improve productive and reproductive traits of Horro rams under small holder farming system.

Keywords: Horro Rams; Body Weight; Testicular Growth; Body Condition Score.