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Growth Performance, Rumen Fermentation and Blood Constituents of Goats Fed Diets Supplimented with Bentonite

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Abstract

Fifteen male Angora goats with an average body weight of 12.9 kg were randomly assigned to three groups of five kids each in an 84 days' growth experiment. Animals were kept in semi-opened pens rations that consisted of concentrate mixture and urea treated rice straw (3 kg urea dissolved in 50 kg water and sprayed on 100 kg rice straw). Bentonite 0 (control), 2.5 and 5 % was mixed for each group with the concentrate mixture.

Results showed that inclusion of bentonite significantly ($p < 0.05$) increased daily gain of kids without significant difference between the bentonite groups 2.5 and 5 % respectively.

Results also showed that addition of bentonite to the ration of kids caused a significant ($p < 0.05$) improvement in feed conversion efficiency. Bentonite significantly ($p < 0.05$) increased dry matter (DM), organic matter (OM) and crude protein (CP) digestibilities. The nutritive value (%) expressed as TDN showed an increase ($p < 0.05$) for the treatments with bentonite. Nitrogen balance of bentonite groups was significantly ($p < 0.05$) higher than the non-treated control, without significant difference between groups in this respect.

Keywords: Bentonite, goats, rumen, TDN, urea