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Effect of Yeast Culture (Saccharomyces cerevisiae) Supplementation on Growth Performance, Nutrients Digestibility, and Blood Metabolites in Beetal Male Goats

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Abstract : This study was conducted to evaluate the effect of supplementation of different levels of yeast culture (Saccharomyces cerevisiae) in Beetal male goats diets on growth performance, digestibility of nutrients and selected blood metabolites. Another objective was to determine the inclusion level of yeast culture for optimal growth performance of Beetal male goats. Eighteen (n=18) Beetal male goats were randomly assigned to three total mixed ration treatments (n=6 goats/treatment): T1, T2 and T3 containing 0gm, 3gm and 6gm/day yeast culture (YC) mixed with total mixed ration (TMR). The diets were iso-nitrogenous and iso-caloric having crude protein 15.2% and ME 2.6Mcal/kg. The total duration of the experiment was 8 weeks. Beetal bucks were fed on TMR diets (T1, T2 and T3) having blend of oat silage, Lucerne hay and concentrate mixed with yeast culture (YC). Bucks were housed individually and feed was offered @ 4% of body weight on dry matter basis. Samples of fresh feed and refusal were collected twice weekly of moisture percentage using hot air oven. Data for daily dry matter intake, body weight gain, nutrient digestibility and selected blood metabolites were analyzed through one-way ANOVA technique under Complete randomised design (SAS Institute Inc, 2002-03). Results were declared significant at $P \leq 0.05$. Overall, DMI was not affected ($P \geq 0.05$) by dietary treatments. Body weight gain, digestibility of crude protein and crude fibre were improved. Blood glucose concentration was detected higher in the group having supplementation of yeast culture (YC) 6gm/day compared to other two dietary treatments. This study suggested the positive impact of inclusion of yeast culture (YC) up to 6gm/day in the TMR diet for optimal growth performance and digestibility of nutrients in Beetal male goats.

Keywords : yeast culture, growth performance, digestibility, beetle goat
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