

EFFECT OF FEEDING LEVEL AND DIETARY SUPPLEMENTATION OF DRY BEAKER'S YEAST ON PRODUCTIVITY OF GROWING FRIESIAN CALVES

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ABSTRACT

To evaluate the effect of feeding level and dietary supplementation of dried Baker's yeast (DBY) on the performance of Friesian growing calves, total of 36 calves with average body weight of 160 ± 2.34 kg and 9.47 ± 0.30 mo of age were assigned randomly into three feeding level groups 80, 100 and 120% of NRC (1989), 12 animals in each. Each feeding level group was further divided into two equal subgroups, one without dietary supplementation (control) and another group supplemented with 10 g DBY/h/d. 6 animals in each. Feeding level lasted for ????. Results show during the summer or winter feeding, calves fed 80% with DBY showed the highest ($P < 0.05$) digestibility coefficients for most nutrients, while the lowest values were almost obtained for those fed 120% without DBY diet. Live body weight (LBW) of calves was the highest ($P < 0.05$) with 120% feeding level plus DBY, while the lowest LBW were recorded with 80% without DBY. Average daily gain (ADG) increased ($P < 0.05$) by increasing feeding level from 100 to 120%. However, DBY supplementation improved ($P < 0.05$) ADG only with feeding level of 80%. The best feed efficiency was recorded ($P < 0.05$) for calves fed 80% with DBY, while those fed 80 or 100% without DBY showed the poorest ($P < 0.05$) feed efficiency. Feeding level showed marked ($P < 0.05$) effect on pH values, and concentrations of total volatile fatty acids (TVFA) and $\text{NH}_3\text{-N}$ in RL during summer and winter feeding. However, the effect of DBY supplementation was more pronounced ($P < 0.05$) TVFA concentrations in RL during summer and winter feeding. Total protein and globulin concentrations in blood plasma increased ($P < 0.05$) by increasing feeding level. However, DBY supplementation increased ($P < 0.05$) total protein concentration only with 80% feeding level. Overall concentration of T4 in blood plasma increased ($P < 0.05$) feeding level up to 120%, and was not affected by DBY supplementation. According to this study growing Friesian calves fed 80% with DBY showed the highest feed efficiency from the nutritional and economical points of view.

Keywords: Calves, feeding level, dry Baker's yeast, growth performance.

INTRODUCTION

Several authors study the effect of feeding level on nutrient digestibility coefficients. Some of them showed that the digestibility of the DM, CP and gross energy were better with *ad lib.* than restricted feeding (90% of *ad lib.*). Meanwhile, others found that diet nutrient digestibility was increased with restricted feeding compared to *ad lib.* one (Glimp *et al.*, 1989 and Hicks *et al.*, 1990).