

EFFECT OF RECOMBINANT BOVINE SOMATOTROPIN (RBST) IN DAIRY PRE PUBERTAL HEIFERS: PRODUCTIVE PERFORMANCE

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The aim of this study was to evaluate the recombinant bovine somatotropin administration in pre pubertal dairy heifers on performance. Thirty Holstein heifer with average weight of 131.95 ± 26.72 kg and age of 6.2 ± 0.35 months were used. The animals were randomly divided into 2 groups, which received the following treatments: Control (without application of somatotropin); rBST (equivalent to 250 mg of recombinant bovine somatotropin). The somatotropin (rBST) was applied to the animals every 15 days. The total experimental period was 90 days, and data were collected every 30 days. Diets were formulated to achieve an average daily gain of 700.0 g d^{-1} by NRC, 2001 software. The animals were weighed in mechanical balance for performed body weight (BW), average daily gain (ADG) and measured with hipometer for performed thorax perimeter (TP), wither height (WH), corporal length (CL), rump height (RH) and rump width (RW) every 30 days in the morning before feeding diets. For dry matter intake (DMI) evaluation samples of all diet ingredients andorts from each heifer were collected weekly for *ad libitum* intake and orsts in 10%. In according with DMI and ADG data were calculated feed conversion (DMI/ADG) and feed efficiency (ADG/DMI). Data were submitted to analysis of variance and nalyzed by repeated measures by PROC MIXED by SAS version 9.0. Data obtained at time 0 were used with covariate in the model. It was observed time effect for final BW, TP, WH, CL, RH, RW, DMI, DMI/ADG and ADG/DMI. Interaction effect was observed for ADG, DMI/ADG and ADG/DMI. Heifers received rBST presented higher final BW ($150.25 \text{ vs } 184.20$ kg) and ADG ($0.647 \text{ vs } 0.859 \text{ kg day}^{-1}$) regarding the control group. Same results were observed for thorax perimeter and corporal length, where rBST showed higher corporal development in relation the control group. The rBST influenced DMI of the heifers. Heifers received the hormone showed higher DMI in relation control ($4.89 \text{ vs } 4.13 \text{ kg day}^{-1} \text{ DM}$), respectively. However rBST only influenced ADG/DMI, but not DMI/ADG. Heifers received rBST showed best feeding efficiency in relation control group. The recombinant bovine somatotropin (rBST) administration influenced positively the productive performance of pre pubertal dairy heifers.

Keywords: Cattle, hormone, intake.

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