



Propolis (LLOS)[®] in replacement the Sodium monensin in the performance of finished young bulls Nellore in feedlot

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INTRODUCTION

The utilization additives in bovine diet increases the feed efficiency, stimulates the growth, maximizing the feed lot animals performance. The ionophore is a kind of composed that featured between the additives. Actually, there are more than 120 kinds of ionophore. However, only sodium monensin, salinomycin, laidlomycin propionate are approved to be used in ruminant diet. The action occurs mainly above the ruminal microbiota, acting in microorganisms cellular membrane, modifying the process of ruminal fermentation. The sodium monensin presents positive results for several years. In the U.S the use of this ionophore in the confined bovine food began in 1976. However the requirements of meat products import markets of meat products determine that the animals be feed with rations free of antibiotics, additives and growth promoters. The propolis is a natural product, collected by bees in bud of trees, flowers and pollen. The therapeutic propriety, as antimicrobial, healing, anti fungal, anti inflammatory is attracting interest of researchers. In propolis composition, are present flavonoids that are fenolic compounds, do not synthesized by animal organism. The flavonoids to be ingested, participates in physiological process, assisting in the absorption and the action of vitamins, acting in the healing process as

The animals were weighing by the morning in solid food fasting. The trials have three experimental diets CON - Control (3 bulls), MON - Sodium Monensin (14 bulls), PRO - Propolis (LLOS) (11 bulls), all diets were compound by a basic diet of roughage (corn silage) and concentrate (grains of corn, soybean meal, urea, mineral salt and limestone).

The CON trial is free of additives; the Mon trial used 10% of sodium monensin, marketed as Rumensin 100, the doses were established as the manufacturer leaflet recommendation, it was used the maximum dose of 3g for each animal at day for bovine finished in confinement; at PRO trial it was used the propolis additive (LLOS), the doses were 35g for each animal at day as recommendations.



There were no significant differences, (P>0,10) for IW, kg; DMI%W; CY, %; been the medium values for this variables 402,16kg; 9,68kg/day; 1,98% and 54,48% respectively. The CAMS was better (P<0,04) in relation to the CON and MON trials. The dry mater feed conversion using propolis additive (LLOS) improved in 20,14% compared to CON trial and 20,5% compared to MON trial. The dairy weight gain was better (P<0,06) for the PRO trial. Observed a higher gain (P<0,01) for the PRO treatment.

Table 1. Initial weight (IW), Dry matter intake (kg/day, DMI), dry matter intake in relation to live weight (DMI/LW), dry matter alimentary conversion (DMAC), daily weight gain (DWG), final weight (FW), hot carcass weight (HCW) and dressing percentage (DP) of different crossbreed finished in feedlot.

Parameters	Treatments			Mean	CV	P<F
	Control	Monensin	Propolis (LLOS) [®]			
N	13	14	11			
IW	402,53±11,66	401,50±7,51	402,45±4,74	402,16	2,14	0,10
FI	9,74±0,92	9,48±0,56	9,83±1,46	9,68	10,47	0,10
FI/LW	2,02±0,14	1,97±0,08	1,96±0,31	1,98	9,8	0,10
FC	9,72±1,62 ^b	9,75±1,72 ^b	8,09±2,01 ^a	9,19	19,2	0,04
DWG	0,98±0,29 ^b	0,98±0,22 ^b	1,21±0,28 ^a	1,06	25,6	0,06
FW	474,15±22,13 ^a	481,28±22,10 ^a	501,18±24,63 ^b	485,54	4,71	0,01
HCW	263,85±11,70 ^a	263,58±10,17 ^a	276,94±16,23 ^b	268,12	4,73	0,02
HDP	54,51±0,70	54,23±1,18	54,70±1,03	54,48	1,83	0,10

* Coefficient variation.



The diets were calculated according to the 1996 beef cattle NRC to allow a dairy gain weight of 1,20kg by animal a day, besides being isonitrogenous, isoenergetic, they were provided to provide a relation of roughage/concentrate of 52:48. At the experiment end the animals were slaughtered with live weight over 480kg on a commercial slaughterhouse near the farm, after rest and water diet as the slaughterhouse recommendations.

The carcass was sawn medially by the sternum and spine, leading two same half; they were weight measure, by providing the hot carcass weight. The carcass yield was obtained by the weight of animal in fasting before sending to slaughterhouse.



The experimental model was composed by three trials (Control, sodium monensin, propolis (LLOS)), they were distributed randomly. The medium compared by Tukey test at the levels 10% and 1% of significance using the SAEG 9.1 (2007).

RESULTS AND DISCUSSION

The results of dry mater intake, dry mater intake on weight, dry mater on feed, dry mater conversion, daily weight gain, final weight, hot carcass weight, carcass yield are presented in the Table 1.

The IW, kg was 5,39% and 3,97% lower, respectively CON and MON in relation to the FW,kg of PRO trial. The HCW was higher (P<0,02) for the PRO trial. The HCW of CON and MON trials showed inferior of 4,72% and 4,82% respectively for the diet that contains the Propolis (LLOS) additive. The action mode of Propolis (LLOS) additive is still unknown, doesn't know if the action is directly in the rumen, gut or in another parts of animal organism, been necessary more studies.

As GRANGE & DAVEY (1990) the propolis has therapeutic proprieties, rich in flavonoids, that does the antimicrobial effect acting over the gram positives bacterial. The flavonoids intake helps in physiological process, in vitamins absorption, in healing process acting as antioxidants and anti microbial action (WILLIAMS et al., 2004). PARK et al. (2000), observed gram-positive bacteria inhibition in vitro cultures of isolated bacteria.

CONCLUSIONS

The Propolis (LLOS) use improved performance of the animals due to your therapeutics and ant biotical functions.

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