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PROGRAMA DE PÓS-GRADUAÇÃO EM ZOOTECNIA

CARCASS CHARACTERISTICS OF FEEDLOT CATTLE FED WITH 50%:50% FORAGE TO CONCENTRATE RATIOS WITH ADDITION OF PROPOLIS BASED PRODUCTS -LLOS*[1]

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INTRODUCTION

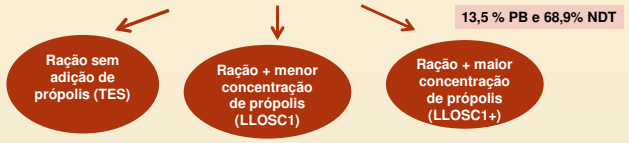
Propolis has shown important therapeutic properties, and because of these characteristics, many studies with propolis have been made in the area of food production, since it operates in the rumen, similar to monensin. Meat quality involves many aspects such as pH, ability to retain water, color, firmness, texture, amount and distribution of fat, tenderness, flavor and juiciness, which are factors responsible for the visual appearance of meat and determinants in the choice by the consumer. The use of propolis in animal nutrition can improve the sensory characteristics of meat and, therefore, ensure consumer preference. The objective of this study was to evaluate the characteristics and carcass quality of feedlot cattle fed diets with 50% concentrate and 50% forage containing products based on propolis (LLOS*) and control (no product).

METHODS

Local: Fazenda Experimental and Analytical Laboratory of Animal Food and Nutrition Department of Animal Science at the State University of Maringá, Paraná, Brazil.

Animals: 24 male crossbred (European x Zebu), whole, weighing 320 kg body weight (BW) and housed in individual stalls.

Experimental diets: → 50% forage (corn silage) and 50% concentrate (20% corn, 30% corn germ, 20% soybean meal, 15% rice bran and 15% wheat bran), where:



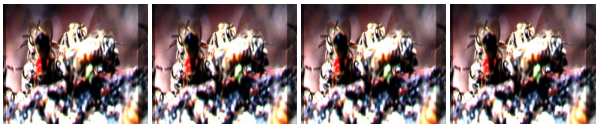
Propolis: The product based on propolis (LLOS) was produced in the laboratory Pharmacotechniques EMU, according to methodology developed by Franco & Bueno (1999).

Determination of physical characteristics of the carcases was determined hot carcass yield (HCY), hot carcass weight (HCW), carcass conformation score (CONF), according to Müller (1980); length cushion (ccox), leg length (ERCP), width of cushion (ECO); eye area (LEA), thickness of backfat (EGC), percentage of bone (DB), muscles (PM) and fat (PG), according to Hankins & Howe (1946), marbling, according to Müller (1980); muscle texture and color, according to Müller (1987).

Experimental design: completely randomized design with three treatments and eight repetitions.

RESULTS AND DISCUSSION

The treatments used in this experiment did not influence (P> 0.05) carcass characteristics of cattle. The marbling of the flesh of animals used here was very low and is characterized as very mild, though many authors reported that higher levels of marbling are found in castrated animals than in whole animals.



However, for the treatment LLOSC1 + is observed that the marbling was higher, with an increase of 16.28% and 20.93% for the control and treatment LLOSC1, respectively (CHART 1). This finding is of paramount importance, because the marbling is responsible for the succulence of the meat, leaving it more palatable and enhancing thus their sensory characteristics.

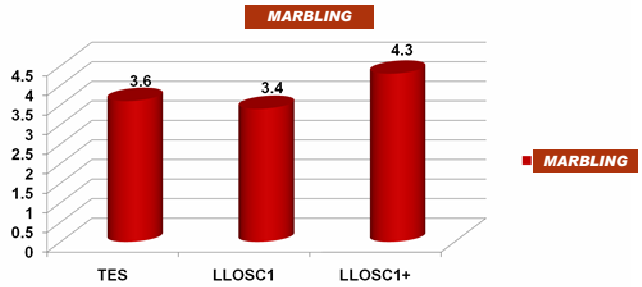


Chart 1 - Marbling in beef cattle fed diets with or without the addition of products based on propolis (LLOSC1).

The pH, the lowest value was obtained by treatment LLOSC1 + (CHART 2). The pH value after 24 hours of slaughter, should be around 5.8 to 5.5. When the pH reaches these values is the enzyme inhibition and anaerobic glycolysis is stopped, thus maintaining the organoleptic characteristics of meat. Due to these factors, the stores do not export meat with pH ≥ 5.8, and only the carcasses of treatment LLOSC1 + fit into this requirement.

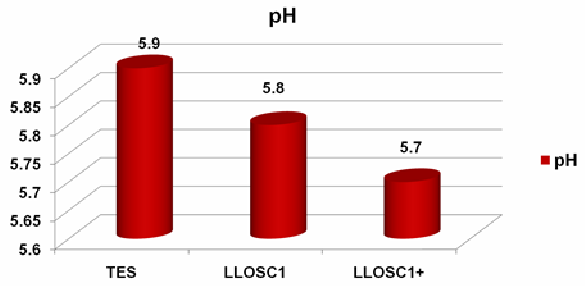


Chart 2 - Final pH of the carcass of animals fed diet with or without the addition of products based on propolis (LLOSC1).

CONCLUSION

The inclusion of products based on propolis on experimental diets did not influence the physical characteristics of housing, however, the results indicate that propolis can act positively on the quality of meat. However, more research must be conducted in this area due to the lack of consistent data on the performance of propolis on meat quality.

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