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Work area: Ruminant nutrition and production

Title: Physicochemical and sensory characteristics of meat from lambs fed spineless cactus-based diets associated with urea levels

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In the scenario of a semi-arid region, the existence of seasonality of rainfall causes a difficulty in the supply of forage, generating in the market an inability to maintain the supply of meat products. Research aimed at evaluating foods produced in the semiarid region of the Northeast in the diet of small ruminants has been carried out with the aim of reducing costs, improving weight gain, shortening the age at slaughter and improving meat quality. In this scenario, the objective of the present study was to evaluate diets based on spineless cactus associated with different levels of urea in substitution of soybean meal on the physicochemical composition and sensory characteristics of meat in lambs finished in feedlot. The experiment was conducted at the Department of Animal Science of the Federal Rural University of Pernambuco, in Recife-PE. Forty non-castrated males Santa Inês animals with initial body weight of 22.2 ± 2.1 kg and age of four months were used. The animals were distributed in a completely randomized design with four diets and ten replications, composed of forage cactus, tifton-85 grass hay, ground corn, soybean meal, urea (under levels 0.0, 7.3, 14.6 and 21.9 g/kg DM), sulfur flower and mineral mixture. The research had 15 days for the adaptation of the animals to the facilities, handling and diets and 60 days for data collection and sampling. After the confinement period, the animals were slaughtered, which was stunned with a captive dart gun, followed by suspension by the hind limbs, bleeding via jugular veins, followed by skinning and evisceration, the carcass was conditioned to a cold chamber (4°C), and later followed by the removal of the Longissimus lumborum muscle where the physicochemical and sensory analyses of the carcass were performed. The data obtained were submitted to statistical analysis using the GLM procedure of the Statistical Analysis System (SAS) (version 9.4). The substitution of soybean meal by urea was not influenced (P>0.05) for the parameters evaluated in the meat, pH, water retention capacity (ACC), color parameters (L*, a*, b*), moisture content, crude protein (CP), and ash (P0.05). However, the cooking loss (P=0.002) and shear force (P=0.044) decreased linearly, while the ether extract content increased linearly (P=0.047). Regarding the sensory attributes of the meat, no difference was observed (P > 0.05) for the parameters of general appearance, color, aroma, tenderness, juiciness and flavor. Thus, diets based on spineless associated with increasing levels of urea in place of soybean meal, reduce ADG and carcass weight, without compromising the qualitative characteristics of the meat of feedlot lambs.

Key-words: Opuntia stricta, Sheep native breed, meat quality, semi-arid, alternative food.

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