

Qualitative characteristics of the carcass of goats finished in native pasture: effects of the genotype

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Introduction The qualitative characteristics of the carcass are evaluated by conformation, marbling, color and texture scores of the meat. An exhaustive description of these characters is necessary, since the consumer makes a selection based on these attributes. Moreover, changes to these characteristics can add value to the end item. The objective of this work was to evaluate the effect of the genotype on the qualitative characteristics of the carcass of goats finished on native pasture.

Material and methods This study was carried out in EMEPA (Empresa de Pesquisa Agropecuária da Paraíba SA) "Pendência Experimental Station", in Soledade, PB. Twenty one goats of different genotypes, with an average age of 280 days and 32 kg of live body weight, were used. After a fasting period for 18 hours, the animals were slaughtered and the carcasses were weighed and subsequently placed in plastic bags. They were transported to a cold storage at 4 °C, where they remained hanging by the tendons of the leg for 24 hours. After the cooling period, the carcasses were scored for conformation using an X point scale where 1= poor and X=excellent And for fat cover using an X point scale where 1=very thin and X=very fat.

The carcasses were split in half longitudinally and the left half was evaluated for loin eye area (LEA), marbling, colour and texture of this muscle on the cut surface between the 12th and 13th ribs, using X point scales from 1 = none to X = excessive, 1= Light pink X= Dark red and 1= fine X = very rough (respectively) using the methodology described by Osorio and Osorio (2003).

Results Treatments were assigned to the animals according to a completely random design with three treatments (non defined breeds - NDB, ½ Boer, and ¾ Boer genotypes) and seven replications. The ¾ and ½ Boer animals presented a better carcass conformation than the SRD animals (P<0.05). Meat marbling was similar to all genotypes (P>0.05), so that the expected superiority of the ½ and ¾ Boer genotypes was not confirmed in this study (P>0.05) and the values observed for the intramuscular fatness were 1.87, 1.71, and 1.83 to the NDB, ½ Boer and ¾ Boer genotypes, respectively. The meat from NDB animals presented a darker coloration (2.87) than the meat from ½ and ¾ Boer genotype animals (2.14 and 2.00, respectively), suggesting a better quality of the meat from these last two genotypes.

Table 1 Means values of the qualitative characteristics of the carcass of goat in function of the genotypes, kept in native pasture

Parameters	Genotype			Sig.	VC (%)
	NDB	½ Bôer	¾ Bôer		
Conformation	1.50 ^b	1.74 ^a	2.66 ^a	*	42.73
State of fat					
Finishing	1.00	1.00	1.16	Ns	20.54
Perirrenal and Pélvic Fat	1.00	1.00	1.20	Ns	20.24
Section of muscle <i>L. dorsi</i>					
Marbling of the meat (quant.)	1.87	1.71	1.83	Ns	39.74
Texture of the meat	3.75	4.00	3.67	Ns	23.83
Coloration of the meat	2.87 ^a	2.14 ^b	2.00 ^b	*	13.02

*Significant (P<0,05) , NS: Not significant

Conclusions Based on the carcass qualitative evaluation, it was verified that the ½ and ¾ Boer genotypes present a carcass with a higher content of lean meat denoted by a better carcass conformation, which is the main indicator of muscular performance; and a better lean meat, demonstrated by the lighter muscle coloration, one of the main meat tenderness indicators.

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