GM 30 Assessment of genotype and finishing system influence on beef quality. **Nunes, M.H.G., Lemes, J.S., Teixeira, B.B.M., Ferreira, F.R., Nalério, É.S. and Cardoso*, F.F.** Federal University of Pelotas (UFPEL) Animal Science Graduate Program. National Council for Scientific and Technological Development (CNPq). Federal University of the Pampa (UNIPAMPA). Embrapa Southern Region Animal Husbandry. *fcardoso@cppsul.embrapa.br

Evaluación del genotipo y la influencia del sistema de terminación en la calidad de la carne

The production of high quality products has been a major focus of the beef cattle industry. Thus it is necessary to determine which genotypes, according to the production system, yield beef with better qualitative traits. The aim of this study was to assess the beef quality based on physical and chemical parameters of 61 steers from six genotypes: Angus (ANAN), Hereford (HHHH), Nelore (NENE), Angus X Nelore (ANNE), Angus X Hereford (ANHH) and Angus X Caracu (ANCR). Finishing systems were feedlot or pasture. Samples of *Longissimus dorsi* between 12th and 13th rib were used in the following evaluations: rib eye area (REA); water-holding capacity (WHC); pH; ether extract (EE); color; cooking loss (CL); moisture; shear force (SF) and subcutaneous fat thickness (SFT). The type III F statistics were used to test the fixed effects in the model and for significant cases the least squares means were compared using Tukey-Kramer tests (α = 0.05). The CRA, pH, EE, color, CL, moisture and SFT evaluations showed no influence (p>0.05) of genotype or finishing system on the beef quality. The ANCR group presented largest REA than ANAN and NENE (78 vs. 66 and 61 cm², respectively); the ANNE and HHHH breed groups showed largest REA than NENE (78 and 74 vs. 61 cm², respectively). A significant difference was observed (p < 0.05) among the studied genotypes for the SF evaluation (Table 1). The ANCR genotype has showed lower SF values (more tender beef) than ANNE and NENE (3.72 vs. 5.93 and 6.91 kgf, respectively). The NENE also presented higher SF value when compared to HHHH breed group (6.91 vs. 4.37 kgf). The Caracu breed can be used as alternative of tropically adapted genotype for crossbreeding with Angus to produce more tender beef than the typically used crossbreeding with zebu breeds. Moreover, this crossing would yield animals with larger rib eye area than Angus and Nelore purebreds, which generally translates to higher retail products yield.

Table 1: Least squares means and standard errors (SE) of steers from different genotypes for shear force (SF) and rib eye area (REA)

Genotype*	Trait	
	SF (SE), kgf	REA (SE), cm^2
ANAN	5.63abc (0.57)	65.74bc (3.30)
ANCR	3.72a (0.50)	78.38a (2.86)
ANHH	4.87abc (0.41)	71.19abc (2.36)
ANNE	5.93bc (0.55)	77.80ab (3.13)
HHHH	4.37ab (0.50)	74.18ab (2.86)
NENE	6.91c (0.69)	60.57c (3.93)

*ANAN=Angus, ANCR=Angus x Caracu, ANHH, Angus x Hereford, ANNE= Angus x Nelore, HHHH=Hereford and NENE=Nelore. Least squares means in the same column followed by the same letter do not differ significantly by the Tukey-Kramer test (p>0.05).

Palabras clave: ganado de carne, cruzamientos, calidad de carne, sistema de terminación.
Key words: Beef cattle, crossbreeding, meat quality, finishing system.