

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

HAPLOTYPE IN THE LEPTIN GENE ASSOCIATED WITH CARCASS FINISHING SCORE IN SANTA INES SHEEP

Luís Fernando Batista PINTO*¹, Alessandro Lima MACHADO¹, Ariana Nascimento MEIRA¹, Evandro Neves MUNIZ², Hymerson Costa AZEVEDO², Gerson Barreto MOURÃO³, Victor Breno Pedrosa⁴, Luiz Lehmann COUTINHO³,

*Autor para correspondência: luisfbp@gmail.com

¹Universidade Federal da Bahia, Salvador, Bahia, Brasil

²Embrapa Tabuleiros Costeiros, Aracajú, Sergipe, Brasil

³Universidade de São Paulo, Piracicaba, São Paulo, Brasil

⁴Universidade Estadual de Ponta Grossa, Ponta Grossa, Paraná, Brasil

Leptin (*LEP*) gene play key role in energy metabolism and, therefore, it's a candidate gene in association studies with growth and carcass traits. Thus, this study aimed to identify association between haplotype in the *LEP* gene and carcass traits in Santa Ines sheep. A total of 192 lambs were genotyped for the 17 single nucleotide polymorphisms (SNPs) (*g.92501356A>G*, *g.92501372G>A*, *g.92501407C>T*, *g.92501543A>G*, *g.92501808G>A*, *g.92502245A>G*, *g.92502283T>C*, *g.92502367C>T*, *g.92502623G>C*, *g.92502642A>G*, *g.92502663T>C*, *g.92502922G>T*, *g.92502947A>C*, *g.92503024G>A*, *g.92503025C>T*, *g.92503044A>G*, *g.92503086G>A*) in the *LEP* gene and evaluated for ultrasound images of rib eye area (REA) and fat thickness (FT) in longissimus muscle between 12th and 13th ribs. In addition, all lambs were evaluated for carcass finish score (CFS), with values between 1 and 5. The haplotype block was found with haploview software and, then, a haplotype trend regression (HTR) analysis was performed, using a 5% significance level. The haplotype analysis found a block with 17 SNPs and seven haplotypes copies showed frequency higher than 4%. The most frequent haplotype copy was AGCGGATCGATGAGCAG with 41.9%, the other haplotype copies were GGTGAGCCC GCGCATGA (13.4%), GACAAATCGATTAGCGG (10.2%), GGCAAATCGATTAGCGG (9.1%), GGCAAATCGATGAGCGG (4.6%), GGTGAGCCCACGCGCATGA (4.6%) and GGCAAATTGATGAGCGG (4.0%). No haplotype effects ($P>0.05$) were found for REA and FT. However, the HTR analysis revealed an effect ($P=0.042$) on CFS, where to replace each copy of most frequent haplotype (AGCGGATCGATGAGCAG) by the haplotype GGCAAATTGATGAGCGG reduced the CFS in $-0,0828 \pm 0,0404$ scores. Therefore, a haplotype in *LEP* gene is associated with carcass finishing score in Santa Ines sheep, which may be sources of information for marker-assisted selection.

Keywords: fat, lamb, ovine, selection, SNP

Acknowledgments: The authors thanks to FAPESB (project APP0116/2009) and CNPq (projects 562551/2010-7 and 474494/2010-1) for the financial support.

Promoção e Realização:



Apoio Institucional:



Organização:

