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ANIMAL SCIENCE

Table of Contents

IN PRESS
CJAS 2015
CJAS 2014
CJAS 2013
CJAS 2012
CJAS 2011
CJAS 2010
CJAS 2009
CJAS 2008
CJAS 2007
CJAS 2006
CJAS 2005

Czech Journal of Animal Science

Identification of SNPs in *ME1* gene and association analysis with meat quality traits in Chinese Red cattle

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Czech J. Anim. Sci., 59 (2014): 297-301

[Supplementary material]

[fulltext]

The objective of this study was to identify single nucleotide polymorphisms (SNPs) in coding regions of bovine *ME1* gene

and to evaluate if the polymorphisms are associated with meat quality traits in Chinese Red cattle. Four SNPs were identified: NW_001495544:g.1721768G>A in exon 2, g.1653796T>A in exon 4, g.1649532G>A in exon 5, and g.1546272T>C in exon 12 and they were genotyped by applying the PCR-RFLP method. Statistical analysis showed that two SNPs, g.1649532G>A and g.1546272T>C, were significantly associated with cooking loss and pH_{24h} ($P < 0.05$). But no statistically significant differences were observed in the g.1721768G>A and g.1653796A>T SNPs for meat quality traits tested in Chinese Red cattle. This suggests that *ME1* gene is a candidate that may have effects on meat quality traits in cattle.

Keywords:

candidate gene; polymorphism; beef; Chinese Red cattle

[fulltext]

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