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Influence of the halothane gene (HAL) on pork quality in two commercial crossbreeds

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ABSTRACT. We evaluated the effect of the halothane (HAL) gene on the quality of pork in domestic pigs. Half-carcasses from two different commercial pig (*Sus domestica*) crossbreeds were analyzed, 46 of which were homozygous dominant (HAL^{NN}) and 69 of which were heterozygous (HAL^{Nn}) for the halothane gene. The measures included backfat thickness, lean meat percentage, carcass weight, pH 24 h after slaughtering, color, and drip loss; DNA was extracted from the haunch muscle. Swine with the HAL^{Nn} genotype had less backfat thickness and higher lean meat percentages than swine with the HAL^{NN} genotype. Yet, swine with the HAL^{Nn} genotype had lower quality meat than those with the HAL^{NN} swine. The pH at 24 h was lower in HAL^{Nn} swine. The meat color was paler in HAL^{Nn} animals, the drip loss was greater in those animals bearing the *n* allele, and the amount of intramuscular fat was not related to the halothane genotype. We conclude that bearers of the recessive allele of the halothane gene produce more meat, but with quality parameters that are inferior to those sought by consumers and industry.

Key words: Porcine stress syndrome gene; PSE; PCR-RFLP; Swine

