

Pork quality in two slaughter plants from the South of Brazil

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This study was carried out with the aim of evaluating the variability of pork quality produced in two slaughter plants located in the South of Brazil. At the plant A, 518 carcasses, 241 from three commercial genotypes specialized in high lean meat yield (GMY-A) [96 gilts (G), 83 surgically castrated males (SCM) and 62 immunologically castrated males (ICM)] and 277 from a genotype specialized in meat quality (GMQ; 133 SCM and 143 F) were evaluated. At the plant B, 239 carcasses from three GMY (GMY-B; 80 G and 159 ICM) were evaluated. In total seven genotypes were evaluated, which, together, represent the genetic material used in Brazil for industrial pork production. The carcasses were classified within the following arbitrary categories of loin drip loss (DL) and marbling (MAR): DL- Normal if $0 < DL \leq 6$, Exudative if $6 < DL \leq 10$, Very Exudative if $DL > 10$; MAR- Score 1, Score 2, Score ≥ 3 (NPPC, 1999). The weight of carcasses was 95.28 ± 13.58 kg, 98.05 ± 12.89 kg and 102.64 ± 9.36 kg for GMY-A, GMY-B and GMQ, respectively. The lean meat yield estimated by the electronic grading probe was $59.66 \pm 2.64\%$, $57.71 \pm 2.76\%$ and $57.43 \pm 3.84\%$ for GMY-A, GMY-B and GMQ, respectively. The proportion of carcasses from GMY-A rated as Normal, Exudative and Very exudative was 75.0, 22.1 and 2.9%, respectively, versus proportions of 5.9, 51.0 and 43.1% in the GMY-B, whereas in the GMQ the proportion was 86.1, 13.0 and 0.7%, respectively. Regarding the MAR, the proportion of carcasses from GMY-A showing Score 1, Score 2 or Score ≥ 3 was 37.8, 41.5 and 20.7% respectively, while in the GMY-B these proportions were 51.0, 46.0 and 3.0%, respectively. In the GMQ the proportions were 17.7, 43.1 e 39.1%, respectively. It is observed a great variability on carcass weight as well as in the pork quality of the GMY within and between the two plants evaluated, with large proportion of carcasses from GMY-B showing high DL ($>6\%$) and low-grade marbling (Score 1). On the other hand, more than 85% of carcasses from GMQ were classified as Normal regarding the degree of exudation and only 18% had low marbling degree. Therefore, at the same time as we find high quality pork from specific genotypes, it is also observed the need to develop actions aiming to reduce the drip loss and increase marbling in the GMY, maintaining, however, the lean meat yield. Among the possibilities are improvements in the pre-slaughter management, intensification of the use of molecular markers for meat quality and the revision of nutritional levels used in the diets.

Key words: drip loss, marbling, pigs, pork quality