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ACCEPTABILITY OF THE PORTUGUESE TRADITIONAL SAUSAGE "CHOURIÇO" PRODUCED FROM ENTIRE MALES' PORK

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ABSTRACT

Surgical castration of male pigs is a common procedure to minimise boar taint risk. Boar taint is an unpleasant odour and flavour perceived by scent and flavour while cooking and eating pork and is caused by the accumulation of skatole and androstenone in the fat. The productivity, sustainability, and welfare of swine production can be improved by raising entire males. This practice could be more profitable once entire males grow faster with better feed conversion rates while producing leaner carcasses with higher protein content when compared to castrated pigs. However, meat from entire males, compared to castrates, is tougher, has less and softer intramuscular fat, with lower water holding capacity, which are unfavourable characteristics for processing dry-cured pork products. Also, the risk of boar taint could lead to consumer dissatisfaction. The purpose of this study was to evaluate the consumers' acceptability of three traditional Portuguese smoked dry, spicy sausages known as "chouriço vinha d'alhos". Samples of "chouriço" from entire male pigs raised locally (Bísaro and a Terminal Cross) and commercial chouriço were used. Samples were produced in an industrial plant using standard formulations, divided into three batches. Batch 1 and 2 were made with 7-months-old entire males of "Bísaro" pigs (an autochthonous Portuguese breed) (BI) and from pigs of a terminal cross Pietrain x (Yorkshire x Landrace) (TC), respectively. Batch 3 was produced using 5-months-old, boar-taint-free commercial pigs (CO), also from the terminal cross described above. Forty consumers were recruited randomly, from which 82.5% declared that they were frequent consumers of this type of product. Samples of "chouriço" from the three batches, identified by a 3-digit code, were presented to the consumers simultaneously. Consumers were asked to score their liking using a 9-point hedonic scale anchored at 'dislike very much' (1) and 'like very much' (9), evaluating the odour, texture and flavour. Using the overall acceptability score, consumers classified samples as liking or disliking, from 'bad' (1) to 'very good' (5). Data were analysed with the Friedman test for paired samples, followed by the Wilcoxon sign rank test as post-hoc. Significance differences were found for all three characteristics and the overall score (odour $p<0.05$, texture $p<0.01$, flavour $p<0.01$, and overall score $p<0.001$). For all the characteristics, CO was significantly different ($p<0.05$) from BI and TC, while these last two batches did not show significant differences between them ($p>0.05$). Median scores observed were respectively for CO, BI and TC (odour 8, 7, 7); (texture 7, 6, 6); (flavour 8, 7, 7); and (overall score 4.5, 3.5, 3.5). It was also asked the consumers which sample they liked the most. Sixty-five per cent of the consumers rated CO as the preferred, followed by 22.5% preferring TC and 12.5% preferring batch BI. Although preference was for the CO sample, scores obtained by samples produced with entire males' pork were accepted by the consumers, given the good response regarding overall acceptability, thus enabling the production of this type of traditional product with meat that is often regarded as undervalued.

Keywords: Consumer acceptability, entire male pork, Portuguese chouriço.

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