

Impact of swine immunocastration on fat quality of Teruel dry-cured hams

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Two experiments were carried out to evaluate the effect of immunocastration on the quality of Teruel dry-cured hams. It is a Spanish Protected Designation of Origin of hams from (Landrace × Large White) × Duroc pigs slaughtered around 135 kg. In the first trial, 20 hams from entire and immunocastrated gilts (EG; IG) were compared (n=10) and, in the second one, 14 hams from surgically castrated and immunocastrated males (SCM; ICM) were tested (n=7). All pigs, carcasses and hams had received the same management at farm, slaughterhouse and cellar. Once hams were cured (19 months), colour and thickness of the subcutaneous fat and marbling, lipid oxidation and fatty acid profile of the *Biceps femoris* muscle (intramuscular fat) were analysed. Besides, in the hams from males, boar taint compounds (androstenone, skatole and indole) concentration was also determined. Data were analysed using the GLM procedure of SAS. In the first trial, no effect ($P>0.10$) of immunocastration was observed on fat colour traits, marbling, lipid oxidation or fatty acid profile, but subcutaneous fat thickness was thicker ($P<0.05$) in IG than in EG. In the second trial, immunocastration did not influence ($P>0.10$) colour traits and thickness of the subcutaneous fat or marbling, lipid oxidation and intramuscular fat composition; however, ICM showed higher ($P<0.05$) skatole and indole concentrations than SCM, although these levels were under the thresholds above which consumers would negatively react to hams. Besides, androstenone concentration in both treatments was under the quantification limit of the equipment used. Therefore, it can be concluded that immunocastration, both in female and male pigs, had limited effect on fat quality of Teruel dry-cured hams. However, it is worth noting that in females it increased subcutaneous fat thickness, which is a positive aspect for the curing process, and in the case of males it failed to reduce the levels of skatole and indole as much as with surgical castration. Project funded by MINECO (AGL2016-78532-R) and by Gobierno de Aragón (FITE and FEDER).