Effects of slaughter weight on meat quality in two pig genotypes

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The present work was a preliminary study for the determination of the chemical-physical characteristics of the raw meat to produce a seasoned product called Cuore di Spalla, resulting from the pig boneless shoulder. Twenty-eight pigs, belonging to Duroc X Large White (DXLW) and Cinta Senese X Large White (CSxLW) genotype, were reared in the same conditions. The animals were slaughtered at the same age and at an average live weight of 143±15 kg for DXLW and 122±15 kg for CSxLW. At slaughter, samples from Triceps brachii muscle were submitted to physical (shear force on fresh and cooked meat; cooking loss) and chemical (moisture; crude protein; ether extract; ash; total lipids; fatty acids) determinations. The live weight at slaughtering (LW) showed a great variability between and within the genotypes so that the results were analysed as trend on the LW. As regards the physical traits, changes in shear force and cooking loss with increasing LW were not found for both crosses. For DXLW the chemical analyses showed an increase of fat content and a relative decrease of protein and of moisture as LW increased. For CSxLW no change were found. As for fatty acid content (g/100 g of dry matter), the results showed a more complex pattern: saturated (SFA) and monounsaturated (MUFA) increased in DXLW genotype; polysaturated fatty acids (PUFA-n3 and PUFA-n6) showed no variation as LW increased. As regards the qualitative analysis of acidic profile (% on total fatty acids), both genotypes showed no changes as LW increased. In conclusion, genetic effect was evident for slaughter LW. This result, together with the effect of the paternal line, were the characterizing factors of the recorded values on meat. Differences were found especially in the fat component, a very important factor in the final product quality.

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Adult ovine meat marketing in Tuscany

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This paper presents the results of a market study on the adult sheep meat trade in Tuscany considering the Conventional and the Halal (Islamic slaughtering) slaughter products. 55 questionnaires were administered to conventional butchers, and 17 questionnaires to Halal butchers. The latter were mainly in Pisa, Livorno, Firenze, and Prato. In the conventional market, the ovine meat consumption seasonality was confirmed; lamb is traditionally eaten at Christmas and Easter. The sheep meat sold percentage never exceeded 5% of the total: the main product was the lamb. In the 7.3% of cases, the adult ovine meat was sold. During the year, an average of 203 lamb carcasses was sold. 270 sheep carcasses, which derived mainly from a Campi Bisenzio (FI) sheep meat butcher, were annually sold in this town there is a tradition for the sheep meat consumption. The lamb carcasses mean weight was 9.0±1.9 kg, while the sheep carcasses' mean weight was 23.4±1.9 kg. In the 78% of cases the ovine carcasses derived from the Garfagnana, Casentino, Mugello, and Maremma Tuscan areas. In Garfagnana the consumers mainly preferred the local Garfagnina bianca and Massese breed lambs. The lamb carcass average price was 9.00 €/kg, while the lamb meat average price was 17.50 €/kg. The adult ovine average prices were respectively 3.5 €/kg for the carcass and 7.0 €/kg for the meat. The lamb carcasses were normally presented with head, heart, trachea, lungs, and liver, which were sold by butchers at very low prices (e.g. 1.00-2.00 €/kg for the head). The Islamic consumers appreciated more adult sheep meat than the Italian consumers. 50% of Halal meat came from France and Ireland, because the consumers considered the Italian Italian meat, which came mainly from Brescia, Lucca, and San Miniato, too red and tough. Islamic consumers preferred male sheep and the front half of carcass. The Islamic butchers had not difficult to find Halal meat in Italy. The Halal sheep carcasses average weight was 20.6±3.0 kg. During the year, the Islamic butchers sold an average of 163 lambs and 153 sheep. The Halal butchers on average paid € 3.00/kg carcass, and sold the meat on average € 5.00/kg. This survey confirmed a lack of interest in adult sheep by Tuscan consumers, while Halal consumers have shown increased interest.

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