

CHARACTERIZATION OF CARCASS COMPOSITION AND MEAT QUALITY TRAITS OF ALENTEJANO PIGS FINISHED UNDER FREE-RANGE CONDITIONS - PRELIMINARY RESULTS (S4P03)

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The Alentejano pig is an autochthonous fatty breed from the south of Portugal, traditionally finished under free-range conditions. During fattening, which occurs in fall/winter months, pigs are fed with acorns and grass, being slaughtered at high body weight ($\approx 150\text{kg}$). Meat and fat of this breed are used to manufacture high quality meat products, including several with the Protected Designation of Origin (PDO) or Protected Geographical Indication (PGI) labels. Despite the impact on final product quality and on productive efficiency, carcass and meat quality of pigs available for manufacture of these products is still poorly characterized.

In this work the carcass composition and physicochemical characteristics of meat from Alentejano pigs raised under free-range conditions was evaluated. In February/March 2017, 541 carcasses of Alentejano pigs (254 males and 287 females) from 11 farms located in the Alentejo region, southern Portugal, were studied. For each animal, the weight of carcass, loins, hams and forelegs, as well as backfat thickness, were recorded. Longissimus lumborum muscle samples were collected for physicochemical analysis.

A high variation was detected for the various carcass and meat quality parameters analysed. Carcass weight varied between 108.1-194.4kg, with heavier carcasses in males than in females ($P < 0.001$; 126.6 ± 12.5 vs. $122.3 \pm 10.1\text{kg}$, mean \pm SD). The weights of loins, hams, and forelegs averaged 3.71 ± 0.52 , 26.5 ± 2.5 and $17.5 \pm 1.6\text{kg}$, respectively.

The weights of hams and forelegs were higher in males than in females ($P < 0.001$), but the loins and hams weight proportion in relation to the carcass did not differ between sexes. The backfat thickness was 5.97 ± 0.84 cm. Regarding meat physicochemical parameters, the moisture and ashes were 67.8 ± 2.3 and $1.10 \pm 0.11\%$, respectively. The pH and water loss were 5.70 ± 0.20 and $13.2 \pm 3.7\%$, respectively. Meat colour parameters averaged 40.4 ± 2.9 , 13.6 ± 1.8 , 7.0 ± 1.3 , 27.2 ± 3.0 and 15.3 ± 2.2 , for L^* , a^* , b^* , hue angle and chroma, respectively. Saturation index was 0.38 ± 0.05 . Total pigments and myoglobin were respectively $55.3 \pm 17.1 \mu\text{g/g}$ and $1.43 \pm 0.44 \text{ mg/g}$. Meat from females showed lower moisture content and water loss ($P < 0.05$) than those from males.

Acknowledgements: Work performed under the project SelectPorAl – Marker development for genomic selection in the Alentejano pig breed (ALT20-03-0145-FEDER-000032) funded by Alentejo2020 program through the FEDER.