Five Mediterranean autochthonous sheep breeds: study on lamb carcass classification and meat nutritional quality

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The objective of the present study was the assessment of carcass commercial quality, chemical, and fatty acid composition of Al- tamurana, Bagnolese, Gentile di Puglia, Laticauda, and Leccese lamb meat. Animals were reared in the Southern Italy and repre- sented the autochthonous sheep breeds mainly spread in Apulia and Campania region. The carcasses were evaluated according to the EU Mediterranean classification system used for carcasses with a weigh ≤13 kg (ECC, 1993). On *Longissimus lumborum* (LL) commercial cut was determined meat chemical composition following the standard AOAC methods (1995), and the relative fatty acids profile according to Bligh and Dyer (1959). Autochthonous sheepbreed resulted in a different EU Mediterranean classifica- tion; with Bagnolese and Laticauda breed that showed a higher carcass weight than Altamurana, Gentile di Puglia, and Leccese breeds. Particularly, 60% of Altamurana, 70% of Gentile di Puglia, and 90% of Leccese carcasses were assigned to B category, whereas all Bagnolese and 90% of Laticauda carcasses were classified in the heaviest category C. On average, lamb meat chemical composition ranged between 21.55 ± 0.16% and 22.20 ± 0.16% for protein content and between 0.76 ± 0.11% and 1.77 ± 0.11% for fat content with significant differences among breeds under study ($p<0.01$ and $p<0.001$ for protein and fat content, respective- ly).

Fatty acid profile emerged differences among breeds; Altamurana, Bagnolese, and Leccese meat displayed lower values of saturat- ed fatty acid (SFA) than Gentile di Puglia and Laticauda meat, whereas Altamurana breed showed the highest content of polyunsat- urated fatty acid. In addition, Gentile di Puglia and Laticauda meat had a concomitant high level of both SFA and monounsaturated fatty acid. Results from principal analysis component performed to meat fatty acid profile and to conjugated linoleic acid (CLA) was useful to cluster lamb meat based on its nutritional properties. In conclusion, the present study demonstrated that lamb meat from five autochthonous sheep breed presented a good carcass quality with a valuable content of CLA, omega-3, and omega-6 fatty acids. Notably, the valorisation of local meat quality is a key issue for avoid the extinction of the autochthonous breed which are high nutritive products attractive for market and consumers' interests.

References:

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Key words: Biodiversity, Meat quality, Autochthonous breed, Fatty acid profile, Carcass classification