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Influence of breed, slaughter weight and feeding on sensory meat quality of suckling kids

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Goat production in Europe is mainly based in milk with high specialized breeds. Also, many local populations, with low dairy performances, are been considered as meat breeds and the kids as a delicatessen by South European consumers. In this scenario, the study of kid's meat quality and how it is affected by weight or rearing system is a relevant issue for the Goat Sector. We have studied the effect of breed (B) on kid's meat organoleptic characteristics using 201 animals from 7 Spanish goat breeds. The effect of slaughter weight (SW) was assessed in 5 meat purpose breeds slaughtered with 4 or 7 kg of carcass weight, and the effect of feeding (F) was assessed in 2 dairy purpose breeds reared under natural or artificial milk conditions. Eight trained panellist evaluated 11 attributes on Longissimus dorsi muscle grilled until 70 °C of internal temperature. A GLM procedure was used to evaluate (B) in light and natural feeding animals, (SW) and (B) effects in meat purpose animals, and (B) and (F) in milk purpose animals, considering interactions between effects. No significant effect was found in goat and milk odour intensities, juiciness or fat, milk and sour flavour intensities. Tenderness, fibrousness, goat flavor, metallic flavour, acid flavor and overall acceptability were significantly affected by (B) independently of their aptitude. Tenderness was higher and fibrousness lower in light and in natural-milk fed animals. Goat flavour was higher in natural-milk fed animals, but not a clear effect of (SW) was observed. Metallic or acid flavours and acceptability were not clearly affected by (SW) or (F), but many significant interactions between effects were observed. In conclusion, kid sensory quality is significantly affected by breed and, inside breed, the increase of weight and the rearing status affects differently depending upon the considered breed.