**The effect of castration at 10 months of age on growth physiology of Serrana de Teruel cattle breed**

*Sanz, A.[1], Albertí, P.[1], Ripoll, G.[1], Blasco, I.[1] and Álvarez-Rodríguez, J.[2], [1]CITA de Aragon, Avda. Montañana 930, 50059 Zaragoza, Spain, [2]Universitat de Lleida, Avda. Rovira Roure 191, 25198 Lleida, Spain; asanz@aragon.es*

Serrana de Teruel (ST) is a dark or tabby-breed raised traditionally on mountain areas of Southern Aragon (north-eastern Spain). In the framework of ST endangered breed conservation programme, beef quality differentiation through steer and bull production has been promoted. In this study, we compared productive performance and peripheral IGF-I concentration of steers and bulls from 10 (surgical castration) to 21 months old (slaughter). Fourteen male calves were managed under a feeding programme divided in 3 phases: I) 10-13 months (ad lib concentrate plus straw), II) 14-18 months (ad lib barley silage plus 3 kg concentrate) and III) 19-21 months (ad lib concentrate plus straw). Feed intake was registered daily on a group-basis. Individual live-weights (LW) were recorded weekly, and blood samples were collected monthly to analyze IGF-I concentration by a commercial kit (IMMULITE® 2000, DPC). Dry matter intake did not differ between steers and bulls, but it was greater in phase I than in phase III (79 vs. 64±4 g/kg $LW^{0.75}$/day). Steers and bulls LW were different at the start of phase III (552 vs. 623±17 kg) and at slaughter (648 vs. 743±20 kg). Average daily gain (ADG) from 10 to 21 months old was lower in steers than in bulls (0.99 vs. 1.23±0.05 kg/day), mainly due to the differences in the month following castration and the last fattening month. Concentrate supply in phase III did not counterbalance the lower ADG in steers. Average IGF-I was lower in steers than in bulls (139 vs. 192±17 ng/ml), mainly due to differences during the phase III. This response might be related to attainment of puberty, and suggests that IGF-I played a role in mediating gonadal rather than nutritional status. In conclusion, ST steers grew slowly and had lower plasma IGF-I concentration than their bull counterparts, these differences being mainly highlighted from 19 to 21 months of age.