

**Effect of limited vs. *ad libitum* concentrate feeding on the performance and carcass and meat quality of Parda de Montaña bulls finished on pasture**

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Supplementation is a common practise to improve performance and meat quality of grazing ruminants. When delivered on *ad libitum* basis to reduce workforce, concentrate intake might exceed the maximum 40% of the daily diet imposed by organic farming regulations. The aim of this study was to compare the performance of grazing young bulls with restricted vs. *ad libitum* concentrates. Parda de Montaña autumn-born bull calves (n=16, aged 6.5 mo, 237 kg) were rotationally grazed on natural meadows. Eight bulls received a fattening concentrate (13.7% CP, 18.8% NDF) on *ad libitum* basis (ADLIB) and the other 8 were fed daily 3 kg per head (3KG). Grass and concentrate intakes were estimated weekly by group, in the case of grass by the herbage regrowth and disappearance method. At the end of the summer (12 mo), bulls were slaughtered and carcass and Longissimus thoracis meat characteristics were assessed, and analyses of variance were performed. Growth rate was higher in ADLIB than in 3KG bulls (1.50 vs. 1.27 kg/d, respectively,  $P<0.05$ ), due to a greater concentrate intake (6.3 vs. 2.7 kg DM/d, respectively), although grass intake was slightly lower than that of the 3KG group (5.9 vs. 7.2 kg DM/d, respectively). Slaughter weight was not different (480 vs. 448 kg in ADLIB and 3KG,  $P=0.12$ ) but ADLIB bulls had heavier carcasses (292 vs. 253 kg,  $P<0.01$ ), and greater dressing percentage (60.8 vs. 56.6%,  $P<0.001$ ). ADLIB carcasses had slightly better conformation score (11 vs. 10 in a 15-point scale,  $P=0.06$ ) and backfat thickness (1.31 vs. 0.76 mm,  $P=0.07$ ), but similar subcutaneous fat colour. Meat shear force and colour were similar for both groups and evolved similarly through the ageing period. Meat chemical composition was similar in both treatments, and there were only slight differences in individual fatty acid contents. In conclusion, the different feeding management resulted in different gains and carcass weights but did not influence meat quality.