

Effects of feeding system on subjective and instrumental measures of subcutaneous fat colour in Churra Tensina light lambs

Carrasco, S.*; Sanz, A.; Ripoll, G.; Panea, B.; Alvarez, J.; Joy, M.
CITA. Avda. Montañana, 930 – 50.059 Zaragoza-Spain. *e-mail: scarrasco@aragon.es



OBJECTIVES




To study the effects of four feeding systems on the subcutaneous fat colour, using both subjective and instrumental measurements.

CONCLUSIONS

There were slight differences among the feeding systems with regard to the fat colour. These differences were detected mainly by instrumental measurements, not by visual appraisal

MATERIAL AND METHODS

48 Churra Tensina lambs

Feeding system		GR	GR+S	DRL-GRE	DRL
					
Weaned at 45 d				✓	✓
Grazing (pasture paddock)	Lambs	✓	✓		
	Ewes	✓	✓	✓	
Concentrate	Lambs		✓	✓	✓
	Ewes			✓	✓

24 h post-mortem, subcutaneous fat colour was measured

22-24 kg LW

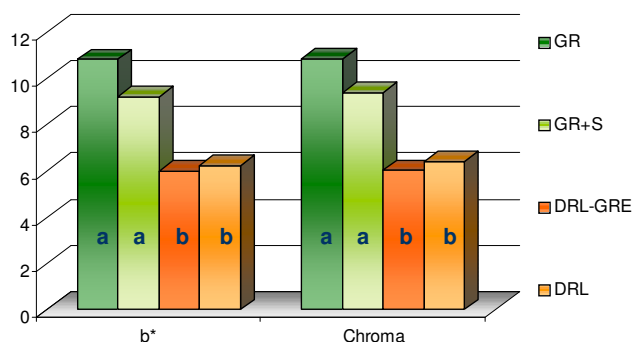


Subjective: white, cream and yellow (Colomer-Rocher *et al.* (1988))

Instrumental: CIEL*a*b* space (Minolta CM2006-d)

RESULTS

Figure 1. Instrumental measures

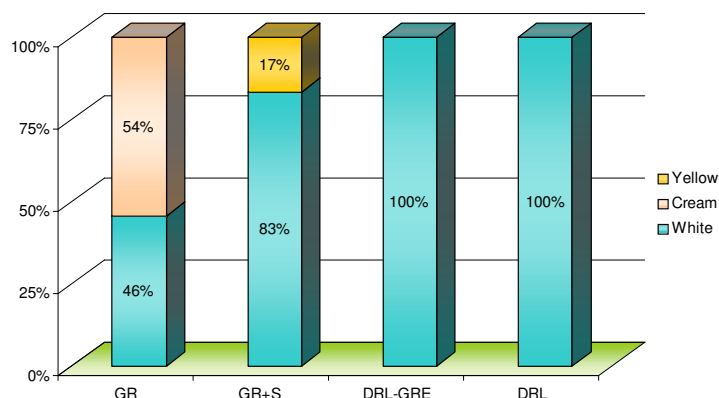


The feeding system affected the yellow index (b*) and chroma (p<0.001), but did not affect the lightness (L*), red index (a*) and Hue. The grazing lambs (GR and GR+S) showed the highest b* and Chroma (p<0.05) values.

Subjective visual appraisal revealed no differences among feeding systems (p>0.05).

Nevertheless, there were 54% and 17% carcasses from GR and GR+S classified as *cream* and *yellow* subcutaneous fat. The remaining carcasses were categorised as *white*, similar to DRL-GRE and DRL treatment.

Figure 2. Subjective measures



REMARKS

Fat yellowness in the carcass might be modulated through lamb creep feeding on permanent pastures from Spanish mountain areas.

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