

Animal management and welfare in integrated systems

Management of grazing circuits in order to promote extensive livestock welfare

Marina CASTRO^{1, 2*}, José F. CASTRO¹, Esther FERNÁNDEZ-NÚÑEZ²

1 Departamento de Ambiente e Recursos Naturais, Escola Superior Agrária - Instituto Politécnico de Bragança. Campus de Santa Apolónia 5300-854. Bragança, Portugal.

2 Centro de Investigação de Montanha (CIMO). Campus de Santa Apolónia 5300-854. Bragança; Portugal.

E-mail address of presenting author*: marina.castro@ipb.pt

Introduction

In Northeast Portugal, small ruminant production is an extensive activity based on daily movements of livestock around their villages. Driven by shepherds, goat and sheep flocks use several daily itineraries. Some decisions about the circuit's organization are greatly influenced by the environmental conditions because animals are very sensitive to extremes of temperature and availability of resources.

Material and Methods

Fieldwork was conducted over the territory of Morais village located near Bragança, (N41° 29' 23" W6° 46' 44"; 600 m above sea level), northeast Portugal. Three goat and three sheep flocks were monitored along their grazing circuits with a hand rover GPS (Global Position system), every three months for a year, in order to determine morning departure and evening return, and grazing itineraries length and duration.


Results and Conclusions

Tab 1: Duration of the grazing day and distances walked per day by season in goats and sheep.

	Duration of grazing day (min d ⁻¹)		Length of grazing itinerary (km d ⁻¹)	
	Goats	Sheep	Goats	Sheep
Autumn	528a±153	562a±105	7.019±0.828	10.441a±0.584
Winter	346b±75	402b±75	6.136±1.589	5.065b±2.684
Spring	388b±43	490ab±114	5.156±0.845	3.997c±1.842
Summer	376b±119	564a±111	6.128±0.893	6.272b±3.478

The results showed that morning departure varied significantly according to animal species and seasons. Sheep flocks set out for pasture earlier in the morning than goats, and their departure for pasture was even earlier in autumn and summer. Evening return was significantly later for sheep flocks than goats; the higher difference was found in summer. Sheep spent more daytime on grazing itineraries than goats independently of the season. The greatest differences were found in summer and spring. The length of the grazing itineraries was significantly longer in autumn compared to the other seasons.




 **José Ferreira Castro**

 Management of grazing circuits in order to promote extensive livestock welfare

 APKY

 http://www.eventweb.com.br/specific-files/manuscripts/wc-clf2015/36873_1432671675.pdf

[GO TO](#)

-  [KEYNOTE SPEAKERS](#)
-  [ORAL PRESENTATIONS](#)
-  [POSTERS](#)