



## Salt as management tool for unguarded livestock in mountain pastures

Eliceits P., Ruiz R. & Mandaluniz N.



Livestock exert an important effects upon natural resources. However, unguarded livestock makes a non-uniform use of the mountain ranges.

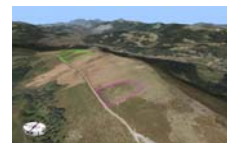
Thus, management alternatives are sought to conduct livestock and improve pasture utilization.

**Objective:** to assess the effect of different salt doses on animal use and, soil and vegetal parameters.

Poster n° 63 - Session n°3



Study carried out: Northern Spain.  
September 2007 and 2008, 4 salt doses spread on plots 0.2 ha. Soil, vegetal and livestock parameters monitored.



### Main results:

Salt did not present any effect upon soil

	Moment			Dose (kg/ha)				P value			
	D-0	D-10	D-30	0	50	100	200	Y	M	D	
Soil	N (%)	1.23	-	1.08	1.1	1.3	1.1	1.2	ns	ns	ns
	P (ppm)	15.7 <sup>a</sup>	-	8.6 <sup>b</sup>	12.7	12.4	10.0	12.6	ns	*	ns
	K (ppm)	400 <sup>a</sup>	-	256 <sup>b</sup>	306	369	341	297	ns	*	ns
	Na (meq)	0.30	-	0.41	0.38	0.30	0.27	0.46	ns	ns	ns
Sward (cm)	Height	4.9	-	5.5	5.0	5.4	4.9	5.3	ns	ns	ns
	Sward	18	-	22	19	20	17	25	ns	0.07	ns
Vegetal structure (%)	Shrubs	51	-	53	48 <sup>ab</sup>	62 <sup>a</sup>	60 <sup>a</sup>	37 <sup>c</sup>	*	ns	0.06
	Others	30	-	25	32 <sup>bc</sup>	17 <sup>b</sup>	23 <sup>ab</sup>	37 <sup>c</sup>	*	ns	0.08
Nutritive value (%)	CP	9.3 <sup>a</sup>	-	10.0 <sup>b</sup>	9.7 <sup>a</sup>	8.6 <sup>b</sup>	9.9 <sup>a</sup>	10.4 <sup>a</sup>	*	*	0.08
	NDF	74	-	74	73 <sup>a</sup>	72 <sup>a</sup>	73 <sup>a</sup>	77 <sup>b</sup>	ns	ns	**
	Na	0.31	-	0.47	0.39	0.31	0.39	0.38	ns	ns	ns
Faecal accumulation	Small	1.0 <sup>a</sup>	-	3.1 <sup>b</sup>	1.1	0.7	2.0	2.4	ns	**	ns
	Cattle	42 <sup>ab</sup>	-	87 <sup>b</sup>	48	33	45	88	ns	ns	ns
	Mares	108	-	197	103	153	157	159	*	ns	ns

200 kg salt/ha: tendency of higher sward/shrub ratio and a higher CP and NDF

Salt attracted livestock in D-10

Detect salt (tendency): mare>sheep>cattle