Wool production grazing campos grasslands in Uruguay

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INTRODUCTION

This study sought to evaluate the wool production and quality of weathers grazing campos grassland at different stocking rates (SR) and rotational stocking methods (RSM) in Uruguay.

METHODS

- Two main effects were evaluated during a two year period in a 2x2 factorial experiment.
- Effects: SR (low: 5.3 and high: 8.0 animals/ha) and RSM (alternate -21/21- and intensive -7/14- for days stocking period/rest period, respectively).
- Animals (sixty mature Merino wethers) were allocated to each treatment on the basis of their body weight, condition score and breeding values for clean fleece weight, body weight and fibre diameter.

RESULTS

- A greater SR was associated to a lesser mean annual and seasonal forage availability while the intensive RSM reduced forage availability compared to the alternate RSM ($P<0.01$).
- A greater grazing frequency and intensity increased green herbage mass and reduced dead material on offered herbage.
- The lower SR was compatible with heavier animals, producing more wool of better quality, regardless of the RSM.
- The alternate RSM at high SR produced more forage, but sheep were heavier under the intensive RSM at low SR.

Effects of SR and RSM on herbage mass and botanical composition of campos grassland and body weight and wool production and quality of Australian Merino weathers in Uruguay.

		SR			RSM			
Variable		**High**	**Low**	**P**	**Alternate**	**Intensive**	**P**	**Interaction**
Herbage mass (kgDM/ha)		1198±36 a	1758±36 b	**	1545±36 a	1410±37 b	**	*
Botanical composition (%)	**Dead material**	44.3±1.6 a	50.7±1.6 b	**	48.8±1.6	46.2±1.6	ns	ns
	Green herbage mass	55.7±1.6 a	49.3±1.6 b	**	51.2±1.6	53.7±1.6	ns	ns
Body weight (kg)	**Initial**	48.3±0.7	47.9±0.8	ns	47.5±0.8	48.7±0.8	ns	ns
	Final	50.2±0.4 a	52.8±0.5 b	**	51.0±0.5	52.0±0.5	ns	*
Wool production and quality	**Fleece weight (kg)**	3.92±0.06 a	4.29±0.08 b	**	4.09±0.07	4.11±0.07	ns	ns
	Fiber diameter (μ)	18.8±0.2	19.3±0.3	ns	19.3±0.2	18.9±0.2	ns	ns
	Staple strength (N/Ktex)	35.5±0.4 a	37.7±0.6 b	**	37.2±0.5	36.0±0.5	ns	ns

Note: Different letters between columns for each factor differ statistically; *=P<0.05, **=P<0.01 and ns= non significant

CONCLUSIONS

The use of adequate stocking rates under controlled grazing systems would allow sustainable production of high quality Merino wool on extensive grasslands in Uruguay.