ID: 135 Wool production grazing campos grasslands

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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). Sixty animals were assigned to a 2×2 factorial experiment with SR (low: 5.3 and high: 8.0 animals/ha) and RSM (alternate: 21/21 and intensive: 7/14, days stocking period/rest period) as the main effects. The results from animal and forage components were analyzed by analysis of variance in SAS (P<0.05). 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. The use of adequate SR under controlled grazing systems would allow sustainable production of high quality Merino wool.

Table 1. Effects of SR and RSM on herbage mass and botanical composition of campos grassland and liveweight and wool production and quality of Australian Merino weathers.

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

[a]vs[b] = between columns for each factor differ statistically; *=P<0.05, **=P<0.01, ns= non-significant