Ann Zootech (1995) 44, Suppl, 352

Natural permanent pasture silage evaluation from one or two cuts in the season

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In southern Chile, pasture is the most important crop, being the cheapest source of nutrients for the ruminant livestock. At the same time, during the winter months, grass silage is the main feed for the more intensified cattle enterprises. It has been clearly shown that improving the quality of silage used for beef cattle is one of the most effective methods for reducing costs over the winter period (Steen, 1991, ARINI Occ Pub, 20, 19-34).

The experiment was carried out at the Remehue Experimental Station (INIA) in Osorno, Chile (40° 35' S) during the 1993 - 1994 season. The aim of the trial was to examine the effect of only one or two cuts of silage harvest on the performance of growing cattle.

Three hectares of an old permanent grassland of mixed botanical composition, containing *Lolium perenne* 30 %, other grasses (*Holcus lanatus*, *Agrostis* spp, *Bromus* spp) 52 %, *Trifolium repens* 5 % and others 12 %, was used in this work. The sward received a total annual fertiliser application of 43 kg N, 159 kg P_2O_5 and 50 kg K_2O. Twenty-one young (initial LW 250 kg) Friesian bulls were allocated to a randomized block design consisting of three treatments as follows : (A) Conventional one-cut system, (early Dec.) with a 70 days cutting interval, (B) First cut silage (early Nov.) with 45 days growth, (C) Second cut silage (mid Dec.) with 45 days regrowth.

Forage dry matter production (ton/ha) at harvest for the three cuts were : 6.4, 2.4 and 4.4 for treatments (A), (B) and (C), respectively.

Overall better performance was achieved with short cutting intervals, with higher ($P \leq 0.05$) growing rates with these two silages compared to the conventional one.

	Treatment		
	A	B	C
Dry matter	165.4	171.1	198.3
pH	4.21	3.90	3.88
Composition of DM			
Crude Protein	118.8	185.1	144.3
Ammonia N(g/kg TN)	105.5	87.1	79.4
D value	62.04	71.23	67.23
Animal performance			
Dry matter intake (kg DM/day)	4.55	5.93	6.35
Growing rate (kg LW/day)	0.323[b]	0.774[a]	0.826[a]

Means with the same superscript, within rows, are not significantly different (Tukey, $P>0.05$).