Yield and Nutritive Value of Warm-Season Grasses

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Introduction In the Rio Grande do Sul state , south Brazil , beef cattle feed is based on natural pasture compound by low nutritive value grasses from late summer to winter . This work aims to evaluate forage distribution and nutritive value of warm-season grasses seeded during summer .

Material and methods The trial was conducted at Agronomy research station in Passo Fundo , Brazil . A split plot trial in a randomized completely block design replicated three times . In the main plots were evaluated three seedings (20 January , 24 February , and 23 March) . In subplots genotypes of sorghum BRS 800 , AG 2501 , and Common (*Sorghum bicolor* (L .) Moench .) , Common pearl millet (*Pennisetum americanum* (L .) Leeke , and Common teosinte (*Zea mays* subsp . *mexicana* (Schrad .) H .H . Iltis) . The plots were composed by seven rows 0 .3 m apart and 5 .0 m long . The fertilizer applied was 300 kg/ha of 5-25-25 (N-P_2O_5-K_2O) plus 30 kg N/ha (urea) at tillering and after each to three forage harvest . The plants with 60-cm height average were clipped to a 15 .0-cm stubble height . Nutritive value analized using near infrared spectroscopy (NIRS) .

Results There were no seeding date and genotype interaction effect . January and February seeding date yielded 6 .0 t DM/ha with good nutritive value (Table 1) . Sorghum genotypes yielded more than common sudangrass and teosinte .

Table 1 *Seeding date and genotype effect on DM yield and nutritive value of summer grasses .*

Seeding date	DM (t/ha)	Tillers (m)	Blade (%)	CP (%)	ADF (%)		NDF (%)		NDT (%)
					Leaf	Stem	Leaf	Stem	
20 Jan .	6 .1a	69a	41c	16 .0 c	37	47	70	77	60
24 Feb .	6 .0a	69 b	60b	17 .8 b	40	48	63	74	57
23 Mar .	1 .0 b	67a	100a	19 .0 a	36	-	65	-	64
Genotype									
AG 2501	6 .8 a	50 c	56 b	15 .0 c	40	49	68	74	74
BRS 800	5 .9ab	58 bc	72 a	17 .0 b	41	47	66	72	72
Pearl millet	4 .0bc	72 ab	52 b	22 .0 a	32	48	62	80	80
Sudangrass	2 .8 c	71 ab	78 a	16 .5 b	36	48	68	77	77
Teosinte	2 .7 c	89 a	78 a	17 .2 b	38	44	62	74	74

Values within a column followed by the same letter are not different ($P>0.05$) by Duncan .

Conclusions Sorghum hybrids are more productive than teosinte and common sudangrass . Forage nutritive value are similar to annual grasses during spring . It is possible have a good forage yield seeding to February in Planalto region of Rio Grande do Sul state , Brazil .