

# **PUBLICATIONS**

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## CONTINUOUS STOCKED VS STRIP-STOCKED STOCKPILED COASTAL BERMUDAGRASS DURING FALL-WINTER

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**Background.** Bermudagrass fertilized in late summer but not harvested as hay provides an excellent source of stockpiled forage for fall-winter grazing in lieu of feeding hay. Stockpiled forage, often at 5000 to 7500 lbs/ac, presents management concerns related to method of use via grazing. The most obvious approaches, that of continuous (CONT) vs. strip stocked (STRP), were evaluated at TAMU-Overton for two years for forage use efficiency. Coastal bermudagrass (COS) hay meadows were stocked with fall calving cows in early Oct and either CONT stocked or STRP stocked (meadow divided into four equal parts). Each strip was grazed in succession. As cows and calves were allowed access to another strip, they continued to have access to previously grazed strips. Forage was sampled at grazing initiation (INIT) and at opening of a new strip (NEXT) (Table 1).

**Research Findings.** Stockpiled COS was about 12 in. tall and had a DM partitioning of about 12% in the top one-third, 30% in the middle third, and 58% in the bottom third of the canopy (Tables 1-2). In Year 1, a new strip was offered about every 14 days; whereas, in Year 2 a new strip was offered about every 25 days. At time of INIT, forage in the previously grazed strip was about 4 in. in height, and was about 90% stem and 10% leaf. In CONT stocked areas, forage DM was similar to STRP after 35 to 40 days. Stocking rates (SR) were not uniform on the three hay meadows; therefore estimates of forage use were expressed as animal-grazing days per ac (AnGD/ac). Based on estimates of forage mass remaining and initiation of feeding hay, Year 1 COS use was 92 AnGD/ac for STRP, and 97 AnGD/ac and 42 AnGD/ac for the two CONT areas. In Year 2, COS use was 141 AnGD/ac for STRP, and 135 AnGD/ac and 73 AnGD/ac for the two CONT areas.

**Application.** Strip stocking of stockpiled bermudagrass is an effective method to control access to forage. The overall efficiency of forage use, however, was similar for either STRP stocked or CONT in this two year study. The primary consideration should be animal body condition and/or expected performance of the cow herd. Intake should not be restricted for a prolonged period for the sake of any management scenarios to enhance efficiency of forage utilization. When using strip stocking of stockpiled forage, opening a new, previously ungrazed area should be based on stubble height and percent leaf remaining in the grazed areas. Protein-energy supplementation often enhances utilization efficiency of COS that has a high stem:leaf ratio.

**Table 1.** Strip-stocking of stockpiled Coastal bermudagrass during the fall-winter.

YR/ITEM	GRZ <sup>1</sup> STAT	DATE	AVG HT (in)	CANOPY DM				STEM %	LEAF
				TOP 1/3	MID 1/3	BOT 1/3	TOTAL		
YR1-STP I	INIT	10-15-02	10	696	1726	3487	5909	55	45
	NEXT	10-29-02	3.6				1394	86	14
YR1-STP II	INIT	10-29-02	11.5	636	1822	3446	5904	55	45
	NEXT	11-11-02	6.3				2182	75	25
YR1-STP III	INIT	11-11-02	13	816	1596	3974	6386	60	40
	NEXT	11-26-02	3.8				1363	94	6
YR1-STP IV	INIT	11-26-02	13.8	912	1982	3127	6022	60	40
	FINAL	12-12-02	3.4				1392	100	0
YR2 <sup>2</sup> -STP I	INIT	10-6-03	12	638	2194	4318	7150	55	45
	NEXT	11-3-03	4.3				2299	83	17
	FINAL	1-23-04	4.0				1030	100	0
YR2-STP II	INIT	11-3-03	12.5	696	2030	4625	7351	56	44
	NEXT	11-25-03	6.0				3442	95	5
	FINAL	1-23-04	4.0				1159	98	2
YR2-STP III	INIT	11-25-03	12.5	773	2237	5143	8153	57	43
	NEXT	12-17-03	4.6				1932	99	1
	FINAL	1-23-04	4.3				1159	100	0
YR2-STP IV	INIT	12-17-03	11.9	1176	2225	3039	6440	63	37
	FINAL	1-23-04	4.8				2002	100	0

<sup>1</sup>Grazing status (GRZ STAT) of strips at initiation of grazing (INIT) and opening of the next strip area (NEXT).

<sup>2</sup>Initiated feeding round baled hay *ad lib* on 1-2-04 and protein supplement on 10-24-03.

**Table 2.** Continuous stocking of stockpiled Coastal bermudagrass during the fall-winter.

YR/PAS	DATE	AVG HT (in)	CANOPY DM				STEM %	LEAF
			TOP 1/3	MID 1/3	BOT 1/3	TOTAL DM		
YR1-PAS1	10-15-02	9.4	638	982	1378	3998	55	45
YR1-PAS1	10-32-02	5				2074		
YR1-PAS1	11-26-02	2.5				1344		
YR1-PAS1	12-12-02	2.9				816	99	1
YR1-PAS2	10-17-02	14.3	434	1454	2174	4063	60	40
YR1-PAS2	10-31-02	7.5				3672		
YR1-PAS2	11-26-02	4.4				1613		
YR1-PAS2	12-12-02	5.5				1622	94	6
YR2-PAS1 <sup>1</sup>	10-1-03	12.5	734	2069	4742	7546	50	50
YR2-PAS1	11-7-03	4.1				2078	81	19
YR2-PAS1	11-25-03	4.1				1217	90	10
YR2-PAS1	12-17-03	3.3				1210	99	1
YR2-PAS1	1-23-04	2.5				775	100	0
YR2-PAS2 <sup>2</sup>	10-17-03	13.1	730	1512	3074	5316	50	50
YR2-PAS2	11-11-03	3.5				1380	93	7
YR2-PAS2	11-25-03	3.4				1298	96	4
YR2-PAS2	12-17-03	3.3				938	99	1
YR2-PAS2	1-23-04	3.8				485	100	0

<sup>1</sup>Initiated feeding round bales *ad lib* 11-7-03 and protein supplement 10-24-03.

<sup>2</sup>Initiated feeding round bales *ad lib* 10-24-03 and protein supplement 11-14-03.