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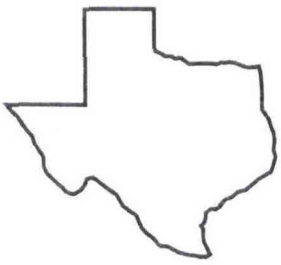

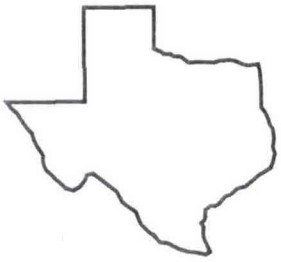

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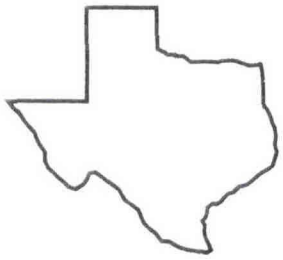

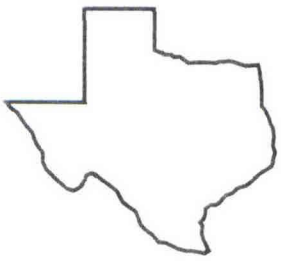

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THREE-HERD ROTATIONAL GRAZING OF BERMUDAGRASS WITH COW-CALF PAIRS AND WEANED STEERS

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Background. Rotational grazing systems of warm-season perennial grasses such as bermudagrass offer both excitement and disappointment to management. Unfortunately, perceptions and expectations of individual animal gains from rotationally grazed bermudagrass are often not met. Rotationally grazed bermudagrass has not generally increased average daily gain (ADG) over continuous grazing; however, in some cases, animal gain per unit land area may be increased by a rotational grazing scheme. Grazing systems must be kept in proper perspective in that both animal performance and forage utilization are important. With respect to matching optimum utilization goals with various classes of livestock, previous research has indicated some potential benefits to using multiple herds in a rotational grazing scheme. The objective of this research was to compare daily gains of cow-calf pairs with weaned steers in a 3-herd rotationally grazed system.

Research Findings. Nine bermudagrass pastures sized at 2.5 to 3 acres each were rotationally grazed by 3 separate herds. Each herd consisted of F-1 (Brahman x Hereford) cows and their 5-month-old Simmental-sired (SIMX) winter-born calves, weaned 10-month-old fall-born SIMX steers, and 15-month-old spring-born purebred Brahman steers (BRAH). With respect to stocking rate, a 2-year average expressed as cow-calf pairs was 2.0/ac, or as weaned steers as 4.75/ac when using total body weight as a criterion (1745 lbs/pair or 745 lbs/steer). Herds were of equal size; thus, the stocking rate was identical. However, since the herds were in adjacent paddocks and grazed in immediate succession, grazing pressures and forage availabilities were dramatically different. Pasture movement decisions were based on forage availability in the first grazers' paddock. The objective was to allow the lead herd to consume the upper 1/3 of the forage and then move to the next paddock. In general, there was a 2- to 4-day residence time in each paddock. Differences in forage available for grazing ranged from an abundance of leaves for the first grazers to a low percentage leaf and high percentage of stems in the remaining stubble for the last grazers. Hence, with respect to ADG, a stocking rate effect was evident (Table 1). Suckling calves had the highest ADG of 2.23, 1.76, and 1.49, lbs, respectively, for 1st, 2nd, and 3rd herds since milk buffered the full impact of reduced forage availability and nutritive value. Suckling SIMX calves gained 1.3 to 1.4 lbs/da more than weaned SIMX steers irrespective of herd order (Table 2). In addition, weaned BRAH steers gained nearly .5 lb/da more than weaned

SIMX steers. Differences between weaned steers were attributable to weight, age, and breed.

Application. A multiple herd rotational grazing system results in animal gains similar to that from different stocking rates. For production purposes, these data support earlier Overton research in that the first grazers have the highest ADG and should be young stocker steers or heifers; whereas, the last grazers probably should be mature, dry cows. Individual animal gains on bermudagrass have always been maximized at the low stocking rates in the Overton pasture experiments. The more complete the utilization criteria, the lower the individual animal performance; however, gains per unit area usually favor moderate to moderately high stocking rates. To obtain optimum utilization systems with bermudagrass, hay harvesting combined with grazing represents one of the best alternatives for management. When both haying and grazing are combined to utilize bermudagrass pastures, risks associated with environmental conditions may be reduced.

Table 1. Two-year gain summaries of cattle involved in a 3-herd rotational grazing system.

	Average Daily Gain, lbs			
Grazing	Pairs		Weaned steers	
sequence	Cow	Calf	SIMX	BRAH
First grazers	.70	2.23	.91	1.48
Second grazers	-.06	1.76	.43	.81
Last grazers	-.26	1.49	.04	.51

[1]SIMX = Fall-born, weaned 1/2 Simmental x 1/4 Brahman x 1/4 Hereford.
BRAH = Weaned purebred Brahman.

Table 2. Comparison of average daily gain (ADG) between calves and stocker steers.

	Grazing Sequence		
Animals	First grazers	Second grazers	Last grazers
	ADG, lbs		
Suckling SIMX	2.23	1.76	1.49
Weaned SIMX	.91	.43	.04
DIFF	1.32	1.33	1.45
Weaned BRAH	1.48	.81	.51
Weaned SIMX	.91	.43	.04
DIFF	.57	.38	.47