

ONA REPORTS

published in

THE FLORIDA CATTLEMAN AND LIVESTOCK JOURNAL

January - 2001

Cow and Calf Gains on Bahiagrass vs Creeping Signalgrass

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Our interest in creeping signalgrass (*Brachiaria humidicola*) as an alternative to bahiagrass began in earnest in 1996 when tawny mole cricket and an unknown problem combined to result in the loss of several thousand acres of bahiagrass pasture in south-central Florida. Creeping signalgrass shares many of the desirable traits of bahiagrass, such as establishment from seed, adaption to wet, infertile soils, and tolerance to grazing. Although we knew something about the relative yield and nutritive value of creeping signalgrass and bahiagrass from small-plot trials, we had not compared these grasses for livestock production.

We established six, 5-acre pastures (three each of Pensacola bahiagrass and creeping signalgrass) in 1998 and allowed 2 years for them to fully establish. In mid-April 2000 we stocked five Brangus cow-calf pairs on each of the 5-acre bahiagrass pastures, and 28 days later, we stocked five pairs on each of the creeping signalgrass pastures. All cows were pregnant (December-February breeding season) when they went on trial in the spring, and they received no supplement through November 30 when this year's trial ends. We used a four pasture rotation within the 5-acre pastures, giving cattle 1-week on and 3-weeks off. Keep in mind that these grasses have different traits, and we attempted to manage them accordingly. Experience has shown that bahiagrass will begin growth earlier in Florida than creeping signalgrass, hence the difference in starting date. Both grasses received 50 lb of N/acre, but bahiagrass was fertilized in March, while creeping signalgrass was fertilized in late May because earlier trials have shown that signalgrass gives little response to early fertilization.

At weaning on August 2, there was no difference between grasses for average calf

weights which were adjusted for age and sex (Table 1). There was little noticeable difference in body condition score at weaning. At 78 days after weaning (October 19), cows grazing creeping signalgrass had gained more weight than cows grazing bahiagrass.

Table 1. Effect of grass on Brangus cow weight and body condition score (BCS), calf weight at weaning, and cow weight at 78 days after weaning. Range Cattle REC, Ona.

Grass	Aug. 2 (weaning)			Oct. 19
	Cow wt.	Cow BCS	Adj. calf wt	Cow wt.
Bahiagrass	1020	4.9	540	1140
C. signalgrass	1120	5.2	551	1310
Probability	0.02	0.20	0.21	0.03

Available forage was always greater in creeping signalgrass pastures compared with bahiagrass (Figure 1). Because it was so dry in 2000, both grasses did not grow much until mid-June. Both grasses flower and set seed in late June and July and this activity adds to summer yield. After September, creeping signalgrass produces little growth, so these pastures have little leaf and much stem in the fall. In fact, almost all of the fall grazing on creeping signalgrass was on residual grass produced in summer. Creeping signalgrass is more sensitive to frost than bahiagrass, so our first frost on November 22 affected signalgrass more than bahiagrass. Frosted signalgrass may not be as palatable as frosted bahiagrass.