USING STOCKPILED WARM-SEASON PERENNIAL GRASSES FOR FALL AND WINTER GRAZING IN EAST TEXAS

L.A. Redmon, G.W. Evers, M.J. Parsons, and T.L. Provin

Background. East Texas cow-calf producers should consider various cost-cutting measures for their operations to maintain a competitive edge and enhance the potential for realizing a profit from their enterprise. Winter feeding programs associated with cow-calf production systems can contribute significantly toward the overall variable cost of annual cow ownership. Traditional programs rely heavily on conserved warm-season grass forages (hay) and off-farm purchased supplements. Identification of other, less expensive strategies could reduce the overall input costs associated with winter feeding programs.

Because of the precipitous decline in forage nutritive value of introduced warm-season grasses during the summer months, it was assumed that species such as bermudagrass could not maintain adequate nutrients during the fall and winter months following the onset of dormancy. Recent information has indicated, however, that this assumption may not be true. Therefore, it was deemed appropriate to investigate the nutritive value of several stockpiled warm-season perennial grasses at Overton. A warm-season perennial grass evaluation trial was established in 1997 at the Texas A&M University Agricultural Research and Extension Center at Overton. Entries included Coastal and Tifton 85 bermudagrasses, Texas Tough (a mixture of common and giant bermudagrass), and Pensacola and Tifton 9 bahiagrasses. After a late August or early September harvest the study area was fertilized with nitrogen. Beginning in October 1999 and November 2000 prior to the first frost event,, grasses were sampled monthly through February. Samples were dried to estimate yield and analyzed for crude protein (CP) and acid detergent fiber (ADF).

Research Findings. Data from the fall/winter period of 1999-2000 and 2000-2001 will be presented. The fall-winter of 1999-2000 was characterized as somewhat dry. Only a total of 7.6 in. of precipitation was received from November through February compared to a long-term average of 16.4 in. The second year, 2000-2001, however, was atypical in that we received a total of 27.9 in. of precipitation from November through February, with 11.7 in. occurring during November alone, following an extremely dry summer. This situation resulted in reduced DM accumulation, but growth that was high in CP. Dry matter accumulation at the first sampling date and average CP and ADF values for all sampling dates for both years are shown in Table 1.

Application. Nutritive value data obtained from the first two years of the stockpiled warm-season perennial grass trial indicate it is possible to maintain a sufficient level of CP and digestible energy (estimated from ADF) for mature, dry, pregnant cows. The nutrient

requirement of these animals is usually given as 8-10% CP and 50-52% total digestible nutrients (TDN), levels that were easily achieved by most of the species. The use of stockpiled warm-season grass in lieu of hay could provide a potential savings of $35-40 per cow per winter compared to traditional hay feeding programs. The accumulation of warm-season forage, however, should not be an accidental accumulation, but one that is planned to achieve a sufficient quantity of forage with adequate nutritive value to meet the needs of a dry cow until some time in January. The initial step is to identify and defer from grazing certain pastures for accumulation of forage in September and October. These pastures should be grazed short or cut for hay around September 1 and provided with adequate fertility to produce forage of good nutritive value. A controlled grazing management scheme, such as strip grazing with a portable electric fence, should be used to minimize forage waste. A sample of the top 2/3 of the standing forage should be collected and analyzed prior to grazing initiation to ensure that available nutrients will meet the nutrient requirement of the cow. Additional risk for the cow-calf producer is associated with this program is a fall drought. There will be years when adequate moisture will not be received in late summer and early fall to produce the required level of stockpiled warm-season grass. It is therefore recommended that an adequate supply of hay be maintained under a shed for this eventuality.

Table 1. Dry matter accumulation prior to first frost and average crude protein (CP) and acid detergent fiber (ADF) levels for monthly samplings from October through February at Overton.

Variety	DM (lbs/ac)	CP (% DM)	ADF (% DM)
	1999-2000		
Tifton 85	3758	12.5	33.9
Coastal	1912	11.6	34.1
Texas Tough	2600	12.6	35.0
Pensacola	935	13.9	37.6
Tifton 9	743	13.6	35.1
	2000-2001		
Tifton 85	1234	21.2	34.6
Coastal	653	18.9	36.4
Texas Tough	1123	21.2	35.9
Common	780	23.2	32.3
Pensacola	478	20.3	39.9
Tifton 9	420	18.9	41.7