SEEDED *VS* VEGETATIVELY PLANTED BERMUDAGRASSES

G. W. Evers, M. J. Parsons, and T. J. Butler

Background. Bermudagrass is the primary warm-season perennial grass used for beef production in the southeastern USA. There has been a great deal of interest in bermudagrasses established from seed as opposed to sprigs. Besides being less expensive than sprigging, seeded varieties can be used on small acreages, steep slopes, and cut-over timber land where good seedbed preparation for sprigging is not economical or feasible. Some of the seeded bermudagrass varieties are selected bermudagrass lines and others are mixtures of Giant (old NK 37) and common bermudagrass. Cheyenne, CD 90160, and KF-CD 194 are selected lines. Ranchero Frio is a mixture of Cheyenne and Giant. Tierra Verde is 50% hulled and unhulled Giant and 50% hulled and unhulled common. Texas Tough is a mixture of 33% Giant and 67% common bermudagrass. Present seed cost of these new seeded types is about $4/lb which is twice the price of common bermudagrass seed. Recommended seeding rate is 5 to 10/acre of hulled seed planted 0 to 1/2 in. deep.

A concern about the seeded bermudagrasses and mixtures of common and giant is that they may revert back to common bermudagrass over time. Hybrid bermudagrasses such as Coastal and Tifton 85, produce very few seed heads and most of the seed are sterile and will not germinate. That is why these varieties must be established from sprigs. A study comparing some of the seeded bermudagrass varieties with Coastal and Tifton 85 was planted at the TAMU Agricultural Research and Extension Center at Overton on May 2, 1997 to compare growth and persistence in northeast Texas. Pensacola and Tifton 9 bahiagrasses were also included.

Research Findings. Tifton 85 and Texas Tough were the most productive entries in 1999 with approximately 6 tons dry matter per acre (Table 1). Yields of CD 90160, Tierra Verde, Ranchero Frio, and Coastal bermudagrass ranged from 8500 to 9700 lb dry matter per acre followed by KF CD194 and Cheyenne bermudagrass. Least productive were Tifton 9 and Pensacola bahiagrasses. At the first harvest in early May, production of Tifton 85 bermudagrass was substantially less than some of the other bermudagrass entries. The previous year was very dry with good rains not occurring until August. A severe armyworm problem occurred in the fall which kept the grasses completely defoliated even though the study was sprayed once with insecticide. The combination of drought and armyworms appears to have been more detrimental to spring recovery of Tifton 85 than some of the other entries. One of the attributes of Tifton 85 that led to its release was greater fall production than other bermudagrass varieties. This was observed at the August 11 and October 27 harvest. Annual yields and the three year average are reported in Table 2.

Application. Tifton 85 continues to be the most productive bermudagrass in the three year test. Several seeded varieties are slightly better or equal to Coastal bermudagrass. Common bermudagrass is becoming more prominent in the common-giant mixtures.

Table 1. Warm-season perennial grass variety test yields in 1999.

	Harvest Dates					
Entry	May 7	June 2	July 1	August 11	October 27	Total
	lb dry matter/acre					
Tifton 85*	704 d†	3168 a	3260 a	2428 a	3355 a	12915 a
Texas Tough	2387 a	2858 ab	2946 ab	1237 b	2321 b	11749 ab
CD 90160	1609 b	2939 ab	2740 a-d	880 bc	1529 b-d	9696 bc
Tierre Verde	1501 b	2070 cd	2826 a-c	1164 bc	1493 cd	9054 c
Ranchero Frio	1792 ab	2870 ab	2486 b-d	492 bc	1344 c-e	8984 c
Coastal bermuda*	1399 bc	2563 a-c	2134 de	705 bc	1706 bc	8507 cd
KF CD194	844 cd	2346 b-d	2203 de	674 bc	1341 c-e	7407 c-e
Cheyenne	826 cd	1450 ef	2302 c-e	731bc	1331 c-e	6640 d-f
Tifton 9 bahia	783 cd	1834 de	1859 e	332 c	663 e	5470 ef
Pensacola bahia	438 d	1157 f	1775 e	566 bc	835 de	4771 f

*Bermudagrass varieties established from sprigs.
†Yields within a column followed by the same letter are not significantly different at the 0.05 level, Waller-Duncan Multiple Range Test.

Table 2. Warm-season perennial grass yield 1997-1999.

Variety	1997		1998	1999	Average
	Grass	Weed			
	dry matter lb/acre				
Tifton 85 bermuda*	5044 a†	0 d	8064 a	12915 a	8,674 a
Texas Tough bermuda	2480 bc	523 bc	5262 b	11749 ab	6,497 b
Tierra Verde bermuda	2085 cd	159 cd	4885 bc	9054 c	5,341 bc
CD 90160 bermuda	2737 b	141 cd	3550 d	9696 bc	5,328 bc
Coastal bermuda*	1611 d	583 b	3739 cd	8507 cd	4,619 c
Ranchero Frio	1943 cd	291 b-d	2912 de	8984 c	4,613 c
bermuda	1914 cd	298 b-d	3664 cd	7407 c-e	4,328 c
KF CD194 bermuda	2408 bc	268 b-d	3430 de	6640 d-f	4,159 c
Cheyenne bermuda	767 e	1077 a	2203 e	5470 ef	2,813 d
Tifton 9 bahia	583 e	1218 a	2167 e	4771 f	2,507 d
Pensacola bahia					

*Bermudagrasses established from sprigs.
†Values within a column followed by the same letter are not significantly different at the 0.05 level, Waller-Duncan Multiple Range Test.