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COMPARISON OF SEEDED AND VEGETATIVELY PLANTED BERMUDAGRASSES

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Background. There has been a great deal of interest in bermudagrass established from seed as opposed to sprigs. In addition to being less expensive, seeded varieties can be used on small acreages, steep slopes, and cut-over timberland where good seedbed preparation necessary for sprigging, is not economical or feasible. Trials conducted in Georgia show yields of some of the new seeded varieties similar to Coastal bermudagrass. Some of these new varieties are selected bermudagrass lines and others are mixtures of giant (old NK 37) bermudagrass which is a diploid and common bermudagrass which is a tetraploid. 'Cheyenne' and 'KF-CD 194' bermudagrass are selected lines. 'Ranchero Frio' is a mixture of Cheyenne and giant bermudagrass. 'Tierra Verde' is 50% hulled and unhulled giant bermudagrass and 50% hulled and unhulled common bermudagrass. 'Texas Tough' is a mixture of 33% giant bermudagrass and 67% common bermudagrass. Recommended seeding rate is 5 to 10 lb/acre of hulled seed planted 0 to 1/2 in. deep.

A study comparing some of the seeded bermudagrass varieties, vegetatively propagated Coastal and Tifton 85 bermudagrass, and Pensacola and Tifton 9 bahiagrass, were planted May 2, 1997 at the TAMU Agricultural Research and Extension Center at Overton. Four additional entries were planted in April, 1999.

Research Findings. During the fifth year of the study, Tifton 85 continues to be the most productive entry (Table 1). The very poor early production at the first harvest on April 24 and the excellent late production at the last harvest on October 4 are typical of Tifton 85. The excellent drought tolerance of Tifton 85 is reflected in the 2300 lb/acre yield on August 28 that was 2 to 7 fold greater than the other entries. Only 1 in. of rainfall was recorded from July 1 to August 15, 2002. Most of the seeded bermudagrasses, including common, produced yields similar to Coastal. Wrangler and giant bermudagrasses, Pensacola and Tifton 9 bahiagrasses, and kikuyugrass were the least productive. This same trend is consistent with the five year average (Table 2). Tifton 85 was the most productive bermudagrass, most seeded bermudagrasses had yields similar to Coastal bermudagrass, and bahiagrasses were the least productive.

Application. Tifton 85 is the recommended bermudagrass because of high productivity, excellent drought tolerance, and good fall production. Its thicker stems do require longer drying when cut for hay. The seeded varieties and mixtures were as productive as Coastal bermudagrass.

Table 1. Warm-season perennial grass variety test yields in 2001.

Entry	Harvest dates					Total
	Apr 24	June 11	July 17	Aug 28	Oct 4	
lb dry matter/acre						
Tifton 85 bermuda	187 e [†]	4692 a	2911 a	2296 a	5594 a	15680 a
Cheyenne	1385 a	4453 a	2867 a,b	956 b-d	3770 b-e	13431 a,b
CD 90160	1353 a	4539 a	2362 a-c	778 b-f	4363 a,b	13395 a-c
Ranchero Frio	977 b	4006 a,b	2393 a-c	985 b,c	4068 b-d	12428 b-d
Tierra Verde	505 d,e	3221 d,c	2517 a-c	1199 b	4306 a,b	11748 b-d
Coastal	494 d,e	3938 a-c	2361 a-c	847 b-e	3910 b-d	11549 b-d
Common bermuda	887 b,c	4164 a	2080 b,c	851 b-e	3370 b-f	11352 b-d
Texas Tough	570 c,d	3327 b-d	1905 c	1063 b	4128 b,c	10993 c,d
KF Seeds	452 d,e	3188 c,d	1744 c	946 b-d	3744 b-e	10075 d,e
Pensacola bahia	224 e	2254 e,f	2014 c	413 c-f	2777 d-g	7682 e,f
Wrangler bermuda	945 b	2963 d,e	879 d	245 f	2518 e-g	7550 f
Tifton 9 bahia	198 e	2120 f	1831 c	436 c-f	2813 c-g	7398 f
Giant bermuda	250 d,e	2961 d,e	630 d	397 d-f	2405 f,g	6643 f
Kikuyugrass	249 d,e	2561 d-f	559 d	297 e,f	1874 g	5539 f

[†]Yields within a harvest followed by the same letter are not significantly different at the 0.05 level.

Table 2. Warm-season perennial grass yields from 1997 through 2001.

Entry	1997	1998	1999	2000	2001	Average
lb. dry matter/acre						
Tifton 85 bermuda ¹	5044 a ²	8064 a	12915 a	12032 a	15680 a	10747 a
CD 90160 bermuda	2737 b	3550 d	9696 bc	10347 b	13395 a-c	7945 b
Texas Tough bermuda	2480 bc	5262 b	11749 ab	7956 e-g	10993 c,d	7688 b
Ranchero Frio bermuda	1943 cd	2912 de	8984 c	9991 bc	12428 b-d	7251 b,c
Tierra Verde bermuda	2085 cd	4885 bc	9054 c	8318 d-f	11748 b-d	7218 b,c
Coastal Bermuda ¹	1611 d	3739 cd	8507 cd	9440 b-d	11549 b-d	6969 b,c
Cheyenne bermuda	2408 bc	3430 de	6640 d-f	8928 c-e	13431 a,b	6967 b,c
KF CD194 bermuda	1914 cd	3664 cd	7407 c-e	7525 fg	10075 d,e	6117 c
Pensacola bahia	583 e	2167 e	4771 f	6809 gh	7682 e,f	4402 d
Tifton 9 bahia	767 e	2203 e	5470 ef	5967 h	7398 f	4361 d
Common bermuda ³			383	7445 fg	11352 b-d	6393
Giant bermuda ³			836	7356 fg	6643 f	4945
Wrangler bermuda ³			188	6744 gh	7550 f	4827
Kikuyugrass ³			0	7620 e-g	5539 f	4386

¹Bermudagrass varieties established from sprigs.

²Yields within a column followed by the same letter are not significantly different at the 0.05 level. Fisher's Protected LSD Test.

³Entries planted in 1999. All other entries planted in 1997.