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.

| able 1. Warm-season | perennia | ıı gra | iss varie | | | | | | | | | | |
|---|--|-------------------------|---|--------------------------|---|-----------------------------|--|----------------------------------|---|---|--|---------------|---|
| r ntm. | Harvest dates | | | | | | | | 4 | Tatal | | | |
| Entry | Apr 24 June 11 | | | | July 17 Aug 28 ——Ib dry matter/acre— | | | | Oct 4 | | Total | | |
| T:4 05 h | 407 | _ † | 4000 | 1_ | | • | | _ | 5504 | _ | 45000 | _ | |
| Tifton 85 bermuda | 187 | | 4692 | | 2911 | | 2296 | | 5594 | | 15680 | | |
| Cheyenne CD 00460 | 1385 | | 4453 | | 2867 | - | 956 | | 3770 | | 13431 | | |
| CD 90160 | 1353 | | 4539 | | 2362 | | 778 | | 4363 | _ | 13395 | | |
| Ranchero Frio | 977 | | 4006 | - | 2393 | | 985 | | 4068 | | 12428 | | |
| Tierra Verde | 505 | - | 3221 | - | 2517 | | 1199 | | 4306 | _ | 11748 | | |
| Coastal | 494 | | 3938 | | 2361 | | 847 | | 3910 | | 11549 | | |
| Common bermuda | 887 | - | 4164 | | 2080 | - | 851 | | 3370 | | 11352 | | |
| Texas Tough | 570 | | 3327 | | 1905 | | 1063 | | 4128 | | 10993 | | |
| KF Seeds | 452 | _ | 3188 | | 1744 | | 946 | | 3744 | | 10075 | | |
| Pensacola bahia | 224 | | 2254 | - | 2014 | | 413 | | 2777 | _ | 7682 | | |
| Wrangler bermuda | 945 | | 2963 | - | 879 | | 245 | | 2518 | _ | 7550 | | |
| Tifton 9 bahia | 198 | | 2120 | | 1831 | | 436 | | 2813 | | 7398 | | _ |
| Giant bermuda | 250 | | 2961 | - | 630 | | 397 | | 2405 | , 0 | 6643 | | |
| Kikuyugrass | 249 | | 2561 | | 559 | | 297 | | 1874 | _ | 5539 | | |
| [†] Yields within a harvest f | lollowed | by ti | ne same | Hell | er are no | Ji Siç | Jillicanti | y an | ierent at | me | U.US level | | |
| Table 2. Warm-season | perennia | l gra | ss yield | ls fro | m 1997 | thro | ugh 2001 | 1. | | | | | |
| Entry | 1997 1998 1999 2000 2001 | | | | | | | | Averag | е | | | |
| | | | | | — lb. c | lry m | atter/ac | re — | | | | | |
| Tifton 85 bermuda ¹ | 5044 | a ² | 8064 | а | 12915 | а | 12032 | а | 15680 | а | 10747 | а | |
| CD 90160 bermuda | 2737 | b | 3550 | d | 9696 | bc | 10347 | b | 13395 | а-с | 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 | | 8984 | С | 9991 | bc | 12428 | b-d | 7251 | b,c | |
| | | | 4885 | bc | 9054 | С | 8318 | | | | 7218 | b,c | |
| Tierra Verde bermuda | 2085 | | | | | | | | 11549 | h-d | 6969 | b.c | |
| Tierra Verde bermuda Coastal Bermuda¹ | 2085 1611 | | 3739 | | 8507 | | 9440 | b-d | 11349 | D G | | - , - | |
| | | d | | cd | 8507 6640 | cd | 9440 8928 | | 13431 | | 6967 | | |
| Coastal Bermuda ¹ | 1611 | d bc | 3739 | cd de | | cd d-f | | с-е | | a,b | 6967 6117 | b,c | |
| Coastal Bermuda¹ Cheyenne bermuda | 1611 2408 | d bc cd | 3739 3430 | cd de cd | 6640 | cd d-f c-e | 8928 | с-е fg | 13431 | a,b d,e | | b,c c | |
| Coastal Bermuda ¹ Cheyenne bermuda KF CD194 bermuda | 1611 2408 1914 | d bc cd e | 3739 3430 3664 | cd de cd e | 6640 7407 | cd d-f c-e f | 8928 7525 | c-e fg gh | 13431 10075 | a,b d,e e,f | 6117 | b,c c d | |
| Coastal Bermuda ¹ Cheyenne bermuda KF CD194 bermuda Pensacola bahia | 1611 2408 1914 583 | d bc cd e | 3739 3430 3664 2167 | cd de cd e | 6640 7407 4771 | cd d-f c-e f ef | 8928 7525 6809 | c-e fg gh h | 13431 10075 7682 | a,b d,e e,f f | 6117 4402 | b,c c d | |
| Coastal Bermuda ¹ Cheyenne bermuda KF CD194 bermuda Pensacola bahia Tifton 9 bahia | 1611 2408 1914 583 | d bc cd e | 3739 3430 3664 2167 | cd de cd e | 6640 7407 4771 5470 | cd d-f c-e f ef | 8928 7525 6809 5967 | c-e fg gh h fg | 13431 10075 7682 7398 | a,b d,e e,f f b-d | 6117 4402 4361 | b,c c d | |
| Coastal Bermuda ¹ Cheyenne bermuda KF CD194 bermuda Pensacola bahia Tifton 9 bahia Common bermuda ³ | 1611 2408 1914 583 | d bc cd e | 3739 3430 3664 2167 | cd de cd e | 6640 7407 4771 5470 383 | cd d-f c-e f ef | 8928 7525 6809 5967 7445 | c-e fg gh h fg | 13431 10075 7682 7398 11352 | a,b d,e e,f f b-d f | 6117 4402 4361 6393 | b,c c d | |
| Coastal Bermuda ¹ Cheyenne bermuda KF CD194 bermuda Pensacola bahia Tifton 9 bahia Common bermuda ³ Giant bermuda ³ | 1611 2408 1914 583 | d bc cd e | 3739 3430 3664 2167 | cd de cd e | 6640 7407 4771 5470 383 836 | cd d-f c-e f ef | 8928 7525 6809 5967 7445 7356 | c-e fg gh h fg gh | 13431 10075 7682 7398 11352 6643 | a,b d,e e,f f b-d f | 6117 4402 4361 6393 4945 | b,c c d | |
| Coastal Bermuda¹ Cheyenne bermuda KF CD194 bermuda Pensacola bahia Tifton 9 bahia Common bermuda³ Giant bermuda³ Wrangler bermuda³ | 1611 2408 1914 583 767 | d bc cd e | 3739 3430 3664 2167 2203 | cd de cd e e | 6640 7407 4771 5470 383 836 188 | cd d-f c-e f ef | 8928 7525 6809 5967 7445 7356 6744 | c-e fg gh h fg gh | 13431 10075 7682 7398 11352 6643 7550 | a,b d,e e,f f b-d f | 6117 4402 4361 6393 4945 4827 | b,c c d | |
| Coastal Bermuda¹ Cheyenne bermuda KF CD194 bermuda Pensacola bahia Tifton 9 bahia Common bermuda³ Giant bermuda³ Wrangler bermuda³ Kikuyugrass³ | 1611 2408 1914 583 767 establis | d bc cd e e | 3739 3430 3664 2167 2203 from sp | cd de cd e e | 6640 7407 4771 5470 383 836 188 | cd d-f c-e f ef | 8928 7525 6809 5967 7445 7356 6744 7620 | c-e fg gh h fg gh e-g | 13431 10075 7682 7398 11352 6643 7550 5539 | a,b d,e e,f f b-d f f | 6117 4402 4361 6393 4945 4827 4386 | b,c c d | |
| Coastal Bermuda¹ Cheyenne bermuda KF CD194 bermuda Pensacola bahia Tifton 9 bahia Common bermuda³ Giant bermuda³ Wrangler bermuda³ Kikuyugrass³ ¹Bermudagrass varieties | 1611 2408 1914 583 767 establis | d bc cd e e | 3739 3430 3664 2167 2203 from sp | cd de cd e e | 6640 7407 4771 5470 383 836 188 | cd d-f c-e f ef | 8928 7525 6809 5967 7445 7356 6744 7620 | c-e fg gh h fg gh e-g | 13431 10075 7682 7398 11352 6643 7550 5539 | a,b d,e e,f f b-d f f | 6117 4402 4361 6393 4945 4827 4386 | b,c c d | |