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SELECTION OF A SEEDED BERMUDAGRASS

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Background. Bermudagrass is the most widely grown warm-season perennial grass in the southeastern US. Its popularity is due to adaptability to a wide range of soil types, drought tolerance, and persistence under intensive grazing. The most productive varieties have been hybrids that produce little viable seed and must be established vegetatively by sprigs (roots, rhizomes, stolons). 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 feasible. Most seeded bermudagrasses on the market are blends containing turf type lines, giant bermudagrass, and/or common bermudagrass. Common bermudagrass is a good seed producer and therefore the seed is less expensive than other bermudagrasses. Giant is usually added because it provides earlier growth than other varieties but does not persist in the eastern half of Texas. It has persisted in drier areas under irrigation. A 5-year study at the TAMU Agricultural Research and Extension Center at Overton showed that seeded types can be as productive as Coastal but not as productive as Tifton 85 bermudagrass. A joint research study in cooperation with Seeds West, Inc. at Maricopa, Arizona was initiated in 2002 to evaluate 166 experimental lines and crosses of seeded bermudagrasses and compare them to Coastal and Tifton 85 bermudagrass. Two 6 x 10 ft plots of each entry were established in May 2002. Plots were harvested three times in 2002 and 4 times in 2003.

Research Findings. Tifton 85 was the most productive both years of the available bermudagrass varieties (Table 1). Coastal produced about 1 ton/acre less dry forage than Tifton 85, which is typical. Seeded entries of common, giant, and Cheyenne produced yields similar to Coastal. The range in production of the 166 experimental lines is also listed. Each year there were some experimental lines that were as productive as Tifton 85. It appears from these data that a seeded bermudagrass can be developed that is as productive as Tifton 85. Tifton 85 is more digestible than other varieties in the increased digestibility results in improved animal performance. Comparisons of nutritive value between Tifton 85 and the most productive experimental lines are not complete. Reported results are based on only 2 replications of each entry.

Application. After 2 years of testing, there are some experimental seeded bermudagrass lines that are equal to Tifton 85 in yield. This study will be continued for a third year to confirm

the previous 2 year's results. It is anticipated that there will be a release of a more productive seeded bermudagrass in 3 to 5 years.

Table 1. Forage yields of 166 experimental lines and several varieties for 2002 and 2003 at Overton, Texas.

Entry	2002	2003
	-----lb DM/acre-----	
Coastal	6383	11618
Tifton 85	8878	13810
Common	7557	10624
Giant	5675	9062
Cheyenne	6370	10438
Wrangler	4966	10123
Experimental lines	3960 - 10279	5119 - 15619