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TEXAS BLUEGRASS FOR EAST TEXAS?

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Background. Texas bluegrass (*Poa arachnifera* Torr.) is a cool-season perennial grass that is native to southern Kansas, Oklahoma, western Arkansas, and most of Texas. It has been introduced into Idaho and the southeastern states but there are no reports on its performance. Texas bluegrass produces stolons and rhizomes forming a thick sod with stems 12- to 24-in. tall. It is diecious with male (staminate) and female (pistillate) flowers on separate plants. Only the female plants produce seed which are about 1/8 in. long and have wooly or cotton-like hairs near the base. Leaves are keel-shaped at the tip and are about 1/8 in. wide and 5- to 10-in. long.

Dr. James Read, plant breeder at the Texas A&M University Research and Extension Center at Dallas, collected Texas bluegrass plants throughout northcentral Texas in 1986. Early evaluations at Dallas indicated it had potential for pasture and turf. Two Texas bluegrass synthetics were transplanted at the Texas A&M University Agricultural Research and Extension Center at Overton on 16 November 1990. Tall fescue (PI-100) was seeded on the same day for comparison.

Research Findings. Tall fescue and both Texas bluegrass entries reached solid stands by May 1991. The next autumn, all plots were harvested on 16 December 1991, 21 February, 27 March, and 14 May 1992. The study was fertilized with 50-80-80 of N, P, and K on 19 September and an additional 60 lb N after each of the first three harvests. Forage yields were similar for the three entries at all harvest dates and for total yield (Table 1). Tall fescue produced about 600 lbs more than the average of the Texas bluegrass synthetics at the last harvest. It appears that high temperatures in late spring are more detrimental to Texas bluegrass than to tall fescue. Crude protein percentages were also similar for the three grasses during the growing season (Table 2). Texas bluegrass synthetic 2, however, had a slightly higher protein percentage at three of the four harvests.

Applications. Tall fescue is the only cool-season perennial grass planted for improved pasture in East Texas. It grows well on loam and clay riverbottom soils but does not persist well on sandier soils. Texas bluegrass is native to the sandy creek and riverbottoms in East Texas. After one year of evaluation, yield, protein percentage, and persistence of Texas bluegrass and tall fescue is similar.

Table 1. Forage production of three cool-season perennial grasses at Overton during the 1991-92 growing season.

Entry	Harvest Dates				Total
	16 Dec.	21 Feb.	27 Mar.	14 May	
	-----lb DM/ac-----				
Texas bluegrass-1	2159	2252	2540	3210	10,161
Texas bluegrass-2	1766	2037	2672	2875	9,350
Tall fescue	1923	1769	2539	3659	9,890

Table 2. Crude protein percentage of three cool-season perennial grasses at Overton during the 1991-92 growing season.

Entry	Harvest Dates			
	16 Dec.	21 Feb.	27 Mar.	14 May
	-----Protein %-----			
Texas bluegrass-1	21.7	23.8	21.2	9.4
Texas bluegrass-2	22.3	25.6	22.5	11.1
Tall fescue	19.9	23.9	23.0	10.4