Discussion

Ryegrass varieties and experimental strains were evaluated for forage production during the 2000–2001 season at the Ardmore Pasture Demonstration Farm (table 1). The test included forty-two ryegrasses and two rescuegrass-type bromegrasses.

The early part of the growing season was certainly unfavorable for forage yields. The crop started slowly because soils were dry through mid-October. The first measurable precipitation came on October 20, and stands emerged in early to mid-November. High rainfall and low temperatures during November and December stunted early growth and resulted in little forage production until late February. The first forage harvest was delayed until mid-March. Mild temperatures and adequate moisture prevailed throughout the spring, resulting in excellent spring growth and forage production. Some preplant nitrogen may have been lost by leaching through the soil profile because of the heavy rainfall received in October and November. Therefore, additional nitrogen was applied in early December to stimulate growth.

Forage was harvested four times during the spring phase of the growing season (table 1). Overall, 39 percent of the total forage was harvested on March 22. Muddy conditions delayed the first harvest by several days, causing additional forage accumulation. 'Ribeye' was the earliest ryegrass variety in the test, while the two bromegrasses produced the most late-season forage (combining the last two clippings). Variety WVPB-AR-F-11 developed a thin stand and was slow and relatively unproductive throughout the season. The trial's overall production average of 6,363 pounds per acre was excellent, considering the slow beginning.

Table 2 summarizes the total forage production of common entries that have been evaluated over the last three seasons. The 2000–2001 average total yield was about 16 percent lower than that of the previous year. The varieties that rank consistently high each year are recommended to producers. A relatively new variety, 'Stampede', has had the most stable production throughout the past three years. The older varieties, 'Marshall' and 'Rio', continue to produce abundant forage. 'Tam 90' and 'Common Annual' generally produce early forage but have not been quite as consistent in overall production.

Ryegrass is often used in mixtures with rye and other small grains. Use ryegrass cautiously in wheat and other grain-producing enterprises because it can become weedy, much like wild oats and cheat; it usually volunteers to a good stand and may compete too much with wheat and other grains. Ryegrass is also used extensively in bermudagrass and bahiagrass overseeding and in volunteer pastures.

Table 2. Ryegrass forage performance summary, 1998–2001; Ardmore, Oklahoma

Variety or Strain	1998–1999	1999–2000	2000–2001	Three-Year Avg. (1998-2001)	Common Annual (%)
	Pounds of oven-dry forage per acre				
Stampede	10,086 (4)[1]	8,650 (2)	7,046 (2)	8,594	101
Marshall	10,945 (1)	7,902 (6)	6,661 (8)	8,503	100
Jumbo	10,776 (2)	7,819 (7)	6,836 (6)	8,477	100
Rio	10,723 (3)	7,921 (5)	6,425 (10)	8,356	99
ME 94	9,505 (8)	8,406 (3)	6,960 (3)	8,290	98
Big Daddy	9,613 (6)	7,440 (10)	7,317 (1)	8,123	96
King	9,403 (9)	8,281 (4)	6,685 (7)	8,123	96
Common Annual	9,559 (7)	7,719 (8)	6,944 (4)	8,074	95
Matua bromegrass	9,395 (10)	9,110 (1)	5,336 (12)	7,947	94
Ribeye	9,344 (11)	7,446 (9)	6,844 (5)	7,878	93
Tam 90	9,706 (5)	7,359 (11)	6,516 (9)	7,860	93
CAS-MM6	8,393 (12)	6,821 (12)	6,224 (12)	7,146	84
	Average				
	9,787	7,906	6,650	8,114	96
	L.S.D.[2] (.05)				
	1,440	951	NS		

[1]The number in parentheses is the rank within year.
[2]Least significant difference.

SOME INFLUENCING FACTORS

Planting date: September 28, 2000.

Location: Pasture Demonstration Farm, Ardmore, Oklahoma.

Seeding rate: Ryegrass, 25 pounds per acre; brome grass, 35 pounds per acre.

Seeding method: Drilled in 7-inch rows and planted 1/2 inch deep.

Replications: Four.

Soil type: Chickasha loam.

Management: Disked, rototilled, and roller-harrowed.

Fertilization: Preplant—130 pounds of N and 120 pounds of K_2O per acre on September 13, 2000; top-dress—50 pounds of N per acre on December 8, 2000, and 70 pounds of N per acre on February 6, 2001.

Clipping: Clipped with a sickle mower (Hege Forage Plot Harvester) at a height of 2 1/2 to 3 inches to simulate rotational grazing.

Winter damage: No appreciable damage to any entries.

Temperature: The low temperature was 15 °F on December 12, 2000, and January 3, 2001. Temperatures were 20 °F or lower on ten dates.

Temperature Data

Date	Minimum Temperature (°F)	Date	Minimum Temperature (°F)
December 11	17	December 30	20
December 12	15	January 1	20
December 14	19	January 2	16
December 17	18	January 3	15
December 22	17	January 20	16

Rainfall (Inches)

Month	35-Year Average	1999-2000 Season	2000-2001 Season
September	4.19	8.01	2.00
October	4.34	2.75	13.31
November	2.52	0.56	6.24
December	2.15	0.90	2.69
January	1.68	2.00	2.93
February	1.96	1.12	5.52
March	3.34	3.37	0.69
April	3.60	2.69	1.99
May	5.30	2.00	5.26
Total	29.08	23.40	40.63

Information in this report is inconclusive but should be of great assistance when used with similar information from other sources.

All available information pertaining to the subject should be used in making conclusions and decisions. This publication is intended to furnish supplemental information to aid decision-making and idea formation.

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2000-2001
Forage Yields from **Ryegrass** Varieties and Strains

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Table 1. Ryegrass forage performance, 2000–2001; Pasture Demonstration Farm, Ardmore, Oklahoma

Variety or Strain	Clipping Dates 3/22	4/9	5/1	5/22	2000–2001 Total	Common Annual (%)	Forage Produced by 3/22 (%)
	Pounds of oven-dry forage per acre						
Big Daddy (4N)	2,555	1,930	1,463	1,369	7,317	105	35
Surrey	3,317	1,169	1,241	1,547	7,274	105	46
CAS-EM227	3,149	1,195	1,193	1,548	7,085	102	44
Stampede	3,130	1,370	1,256	1,290	7,046	101	44
ME 94	2,728	1,552	1,107	1,573	6,960	100	39
Common Annual	3,239	1,351	952	1,402	6,944	100	47
Graz-n-Gro	3,417	1,333	966	1,188	6,904	99	49
FLX 1995 (GXS) MR Late	3,202	1,361	1,054	1,282	6,899	99	46
Ribeye	3,461	1,146	936	1,301	6,844	99	51
WVPB-AR-99-L	3,271	1,099	1,225	1,248	6,843	99	48
Jumbo	2,632	1,578	1,521	1,105	6,836	98	39
Bar 9 Lou	2,445	1,585	1,217	1,524	6,771	98	36
BB-Mexican-1	2,478	1,768	1,342	1,173	6,761	97	37
King	3,041	1,311	1,196	1,137	6,685	96	45
WD-40	2,993	1,416	864	1,411	6,684	96	45
SCH-1A	2,742	1,837	1,021	1,068	6,668	96	41
Marshall	2,832	1,409	1,100	1,320	6,661	96	43
Floralina	2,730	1,456	1,061	1,377	6,624	95	41
Jackson	2,856	1,334	1,103	1,326	6,619	95	43
CAS-LFM226	3,000	1,400	1,044	1,142	6,586	95	46
Tam 90	2,560	1,400	1,152	1,404	6,516	94	39
Passerel Plus	2,501	1,478	1,333	1,123	6,435	93	39
TXR 2000-1	2,217	1,650	1,144	1,415	6,426	93	35
Rio	2,460	1,534	1,101	1,330	6,425	93	38
FLX 1998 (SII) LR	2,281	1,628	1,089	1,379	6,377	92	36
FLX 1999 (GA) LR	2,669	1,336	1,027	1,291	6,323	91	42
CAS-MM6X	2,203	1,515	1,065	1,441	6,224	90	35
Joe-1	2,378	1,301	1,280	1,229	6,188	89	38
TXR 2000-T2	2,203	1,633	1,215	1,132	6,183	89	36
FLX 2000 (New) 4X LR Mid-Late	2,574	1,325	1,051	1,175	6,125	88	42
CAS-EM35	2,077	1,436	1,451	1,069	6,033	87	34
FL/NE 2000 (New 2) LRCT	2,605	1,355	890	1,151	6,001	86	43
Bar 9 Tam	2,168	1,619	1,207	1,007	6,001	86	36
FLX 2000 (New 1) 4X LR Bulk	2,465	1,309	1,077	1,134	5,985	86	41
FL/OK 2000 (New 1) LRCT	2,594	1,236	950	1,164	5,944	86	44
TXR 2000-T1	2,180	1,293	1,117	1,303	5,893	85	37
FLX 1998 (New) 4X Late	2,188	1,490	1,111	1,082	5,871	85	37
Rapido (BY061)	2,774	1,063	829	1,167	5,833	84	48
TXR 2000-2	1,782	1,401	1,340	1,276	5,799	84	31
Hellen (BY3773)	2,197	1,404	1,168	962	5,731	83	38
WVPB-AR-98-7	1,746	1,211	1,498	1,202	5,657	81	31
Matua bromegrass	964	1,228	1,715	1,429	5,336	77	18
AGR BW101 bromegrass	838	1,180	1,998	1,312	5,328	77	16
WVPB-AR-F-11	524	1,035	1,521	1,242	4,322	62	12
	Average						
	2,508	1,401	1,186	1,267	6,363	92	39
	L. S. D.[1] (.05)						
	645	NS	344	NS	962		
	C. V.[2] (%)						
	18.4	24.4	20.7	22.6	10.8		

[1]Least significant difference.

[2]Coefficient of variation.