

## DISCUSSION

Ryegrass varieties and experimental strains were evaluated for forage production during the 1999–2000 season at the Ardmore Pasture Demonstration Farm (table 1). The test included forty ryegrasses, two rescuegrass-type bromegrasses, ‘Jagger’ wheat, and ‘Oklon’ rye.

Fall planting was delayed by dry soils through early September. Dry weather during July and August delayed proper soil tillage, fertilizer application, and seedbed preparation. Good rainfall between September 11 and 13 allowed for a September 30 planting date (table 1). After September and October rains, it became dry again in November and December, and the hope of good fall forage dwindled. Mild temperatures prevailed throughout the growing season and, combined with near-normal rainfall from January through April, favored excellent forage growth throughout most of the spring.

Forage was harvested six times during the growing season (table 1). Overall, only 18 percent was harvested by February 24; however, ‘Oklon’ rye and ‘Jagger’ wheat produced, respectively, 53 percent and 32 percent of their forage by that date. ‘Common Annual’ was the earliest ryegrass variety in the trial, while ‘Matua’ and ‘AGRBW 100’ bromegrasses produced the most late-season forage (combining the four clippings after March 21). The overall average production was 7,615 pounds, of which 70 percent was harvested between February 24 and April 26.

Table 2 summarizes the total forage production of common entries that have been evaluated over the last three years. The 1999–2000 average total yield was about 22 percent lower than that of the previous year. The varieties that rank consistently high each year are recommended to producers. ‘Marshall’ and ‘Rio’ ryegrasses have been the most consistent over the three-year period. Marshall is a proven cold-hardy variety, but the mild winters that have prevailed over the last three seasons have not seriously cold-tested ‘Rio’. ‘Tam 90’ and ‘Common Annual’ generally produce earlier forage but have not been 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 self-volunteering winter pastures.

Table 2. Ryegrass forage performance summary, 1997–2000; Ardmore, Oklahoma

Variety or Strain	1997–1998		1998–1999		1999–2000		Three-year Average (1997–2000)	Common Annual (%)
	Pounds of oven-dry forage per acre							
Marshall	5,640	5 <sup>1</sup>	10,945	1	7,902	3	8,162	110
Rio	5,767	3	10,723	2	7,921	2	8,137	109
Matua bromegrass	5,167	7	9,395	7	9,110	1	7,891	106
Southern Star	5,429	6	10,024	3	7,758	4	7,737	104
Ribeye	6,194	1	9,345	10	7,446	7	7,662	103
Big Daddy	5,916	2	9,612	5	7,440	8	7,656	103
Tam 90	5,656	4	9,706	4	7,359	9	7,574	102
Common Annual	5,063	8	9,560	6	7,719	6	7,447	100
Hercules	4,541	11	9,386	9	7,747	5	7,225	97
Tetragold	5,062	9	9,390	8	7,131	11	7,194	97
CAS-MM6	4,126	12	8,393	12	6,821	12	6,447	87
Oklon rye	4,893	10	7,241	13	7,163	10	6,432	86
Jagger wheat	3,657	13	8,450	11	4,366	13	5,491	74
Average								
	5,162		9,398		7,376		7,312	98
L. S. D. <sup>2</sup> (.05)								
	951		1,468		908			

<sup>1</sup>Rank within year.

<sup>2</sup>Least significant difference.

## Some Influencing Factors

Planting date: September 30, 1999.

Location: Pasture Demonstration Farm, Ardmore, Oklahoma.

Seeding rate: Ryegrass and bromegrass, 25 pounds per acre; small grains, 2,000,000 live seed per acre, which approximates 90–120 pounds per acre, depending on variety and species.

Seeding method: Drilled in 7-inch rows; ryegrass and bromegrass planted at a 1/2-inch depth and small grains at a 1-inch depth.

Replications: Six.

Soil type: Chickasha loam.

Management: Disked, rototilled and roller-harrowed.

Fertilization: Preplant—50 pounds N and 60 pounds K<sub>2</sub>O per acre on September 17, 1999. Topdress—75 pounds N per acre on February 15, 2000.

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 17°F on January 30, 2000. Temperatures were 20°F or lower on two dates: January 29, 20°F; January 30, 17°F.

## Rainfall (Inches)

Month	34-year Average	1998–1999 Season	1999–2000 Season
September	4.32	1.74	8.01
October	4.08	4.21	2.75
November	2.39	3.07	0.56
December	2.10	2.43	0.90
January	1.64	1.50	2.00
February	1.98	0.35	1.12
March	3.35	3.45	3.37
April	3.57	4.35	2.69
May	5.31	4.44	2.00
Total	28.74	25.54	23.40

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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# 1999–2000 FORAGE YIELDS from Ryegrass Varieties and Strains

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Table 1. Ryegrass forage performance, 1999–2000; Pasture Demonstration Farm, Ardmore, Oklahoma

Variety or Strain	Clipping Dates						1999–	Common	Forage
	2/24	3/21	4/6	4/26	5/23	6/20	2000 Total	Annual (%)	Produced by 2/24 (%)
Matua bromegrass	237	1,858	2,302	2,222	1,575	916	9,110	118	3
AGRBW100 bromegrass	136	1,480	2,132	2,508	1,764	851	8,871	115	2
Stampede	1,602	2,884	1,357	1,731	1,076	0	8,650	112	19
ME 94	1,270	2,765	1,436	1,707	1,228	0	8,406	109	15
FL X1999 (GA) LR	1,902	2,762	1,186	1,670	790	0	8,310	108	23
King	1,621	2,835	1,086	1,888	851	0	8,281	107	20
CAS-EM3	1,267	2,496	1,698	1,524	1,148	0	8,133	105	16
WVPB-AR-98-7	1,228	2,428	1,646	1,815	991	0	8,108	105	15
Abundant	1,723	2,552	1,243	1,640	922	0	8,080	105	21
Jackson	1,424	3,007	1,143	1,488	913	0	7,975	103	18
Rio	1,622	2,424	1,162	1,648	1,065	0	7,921	103	20
Marshall	802	2,828	1,663	1,621	988	0	7,902	102	10
Natchez	1,479	2,292	1,621	1,675	820	0	7,887	102	19
Jumbo	1,511	2,521	1,306	1,526	955	0	7,819	101	19
Southern Star	1,363	2,631	1,289	1,565	910	0	7,758	101	18
TXR 2000-1	1,079	2,383	1,548	1,741	999	0	7,750	100	14
Hercules	1,469	2,227	1,517	1,526	1,008	0	7,747	100	19
Floralina	1,187	2,801	1,257	1,543	957	0	7,745	100	15
Common Annual	2,502	2,217	1,089	1,319	592	0	7,719	100	32
TXR 2000-T2	977	2,406	1,607	1,638	1,051	0	7,679	99	13
Bounty	1,496	2,683	1,199	1,464	811	0	7,653	99	20
Rustmaster	1,340	2,587	1,343	1,637	732	0	7,639	99	18
FL1995X4NLS	1,417	2,335	1,642	1,478	751	0	7,623	99	19
Zorro	598	2,074	1,852	1,965	1,107	0	7,596	98	8
Beefbuilder	1,624	2,307	1,455	1,460	737	0	7,583	98	21
Sirloin	1,371	2,532	1,246	1,535	896	0	7,580	98	18
BAR 9 TAM	1,102	2,149	1,605	1,665	954	0	7,475	97	15
BAR 9 LOU	1,307	2,694	1,136	1,639	673	0	7,449	97	18
Ribeye	1,324	2,405	1,331	1,594	792	0	7,446	96	18
FL X1998 (SII) LR	716	2,697	1,266	1,740	1,027	0	7,446	96	10
Big Daddy	1,675	2,290	1,443	1,381	651	0	7,440	96	23
CAS-EM5	2,134	2,412	1,029	1,544	305	0	7,424	96	29
TXR 2000-2	378	2,068	1,826	1,980	1,134	0	7,386	96	5
Tam 90	1,603	2,452	1,203	1,528	573	0	7,359	95	22
Advance	1,334	1,983	1,606	1,553	856	0	7,332	95	18
Lafayette	1,038	2,649	1,250	1,419	955	0	7,311	95	14
Oklon rye	3,767	2,423	348	625	0	0	7,163	93	53
Tetragold	1,505	2,427	1,231	1,294	674	0	7,131	92	21
Andy	1,382	2,143	1,362	1,418	801	0	7,106	92	1
Sparr	1,316	2,132	1,279	1,405	867	0	6,999	91	19
Shoot	885	2,153	1,491	1,503	915	0	6,947	90	13
Sikem	538	2,121	1,719	1,562	996	0	6,936	90	8
CAS-MM6	749	2,098	1,679	1,560	735	0	6,821	88	11
Jagger wheat	1,416	2,593	122	235	0	0	4,366	57	32
Average									
	1,328	2,414	1,385	1572	876	40	7,615	99	18
L. S. D. <sup>1</sup> (.05)									
	667	485	314	314	313	50	1,065		
C. V. <sup>2</sup> (%)									
	35.9	14.4	16.2	14.3	25.6	88.5	10.0		

<sup>1</sup>Least significant difference.<sup>2</sup>Coefficient of variation.