

DISCUSSION

Fifty entries were evaluated for forage production during the 2003-2004 growing season at the Ardmore Pasture Demonstration Farm (Table 1). The test included 46 ryegrasses and four prairiegrasses (bromegrass).

The desired mid-September planting was delayed because of insufficient moisture in August and much of September. Adequate moisture became available in late September and good stands were established. However, below normal rainfall minimized forage growth during the late fall and winter months. Cold temperatures in January and early February also contributed to slower winter recovery. Adequate moisture in late February and March and milder temperatures supported fair to good forage production for most of the spring. However, below normal moisture conditions persisted throughout most of the growing season as rainfall at this site was 10 inches below the long-term average. The dry weather during the first half of the season probably limited the forage potential of some of the early forage yielding types.

Forage was harvested four times during the spring phase of the growing season (Table 1). Overall, 27 percent of the total forage was harvested on March 16 and 70 percent of the overall production had been harvested by April 15. This year's overall production average of 6,014 pounds per acre was the highest since the 2000-2001 growing season. FLX2001(New) 4X Mid-late, an experimental ryegrass strain, was the earliest forage producer in the test, while the prairiegrasses were the most productive on the last harvest date.

Table 2 summarizes the total forage production of common varieties that have been evaluated over the last three growing seasons. The 2003-2004 average yield was about 15 percent higher than last season. The varieties that rank consistently high each year are those that should be given top consideration by producers in southern Oklahoma and northern Texas when making planting decisions. Since several varieties are new releases, producers will need to check with their seedsmen about the availability of seed supplies.

Ryegrass is often used in mixtures with rye and other small grains. Ryegrass is also used extensively in bermudagrass and bahiagrass overseeding and in volunteer pastures. 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 will compete with wheat and other grains.

Table 2. Ryegrass forage performance summary, 2001-2004; Ardmore, Okla.

Variety or strain	2001-2002		2002-2003		2003-2004		Three-year Average (2001-2004)	Common Annual (%)
	Pounds of oven-dry forage per acre							
Marshall	5,855	(1)	6,000	(1)	7,204	(1)	6,353	128
Passerel Plus	5,205	(2)	5,588	(3)	6,654	(4)	5,816	117
Ed	5,142	(3)	5,374	(5)	6,570	(6)	5,695	115
Jackson	4,966	(6)	5,335	(8)	6,737	(3)	5,679	115
King	4,992	(5)	5,966	(2)	5,941	(11)	5,633	114
WD-40	4,587	(9)	5,361	(6)	6,590	(5)	5,513	111
Flying A	4,403	(12)	5,251	(10)	6,740	(2)	5,465	110
Brigadier	4,998	(4)	5,479	(4)	5,881	(13)	5,453	110
Stampede	4,588	(8)	5,199	(12)	6,296	(9)	5,361	108
Tam 90	4,941	(7)	4,925	(14)	6,054	(10)	5,307	107
Beefbuilder III	4,168	(14)	5,351	(7)	6,342	(7)	5,287	107
Prine	4,587	(10)	4,623	(15)	6,302	(8)	5,171	104
Jumbo	4,451	(11)	5,273	(9)	5,570	(15)	5,098	103
Ribeye	4,383	(13)	4,986	(13)	5,907	(12)	5,092	103
Common	3,877	(15)	5,205	(11)	5,801	(14)	4,961	100
	Average							
	4,743		5,328		6,306		5,459	110
	L.S.D. ¹ (.05)							
	1,210		680		992			

The number in parentheses is the rank within year.

¹Least significant difference.

SOME INFLUENCING FACTORS

Planting date: Sept. 30, 2003

Location: Pasture Demonstration Farm, Ardmore, Okla.

Seeding rate: Ryegrass: 25 pounds per acre; prairiegrass: 35 to 45 pounds per acre.

Seeding method: Drilled in 7-inch rows and planted at a ¼ - ½-inch depth.

Replications: Four.

Soil type: Chickasha loam.

Management: Sweepled, disked, and roller-harrowed.

Fertilization: Preplant – 60 pounds N and 60 pounds K₂O per acre on Sept. 3, 2003; topdress – 60 pounds N per acre on March 17, 2004.

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 10° F on Jan. 6. Temperatures were 20° F or lower on nine dates during the growing season.

Minimum Temperatures (20° F or lower)

Date	Temp. (° F)	Date	Temp. (° F)
November 24	20	January 27	13
January 6	10	January 30	18
January 7	16	February 7	18
January 19	20	February 13	18
January 26	18		

Rainfall (Inches):

Month	2002-2003		2003-2004	
	38-year Average	Season	Season	Season
September	4.28	1.34	2.78	
October	4.26	4.58	.03	
November	2.47	1.08	3.37	
December	2.20	4.73	.95	
January	1.65	0.00	1.18	
February	2.03	1.92	3.69	
March	3.24	1.63	1.46	
April	3.57	1.14	4.27	
May	5.29	7.21	.54	
Total	28.99	23.63	18.27	

Information in this report is not conclusive, 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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2003 Forage Yields from Ryegrass Varieties and Strains

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Table 1. Ryegrass forage performance, 2003 - 2004; Pasture Demonstration Farm, Ardmore, Okla.

Variety or strain	Clipping date				2003-	Common	Forage
	3/16	4/15	5/07	6/02	2004 Total	Annual (%)	Produced by 3/16 (%)
AGR BW102	1,820	3,155	1,199	1,105	7,279	125	25
Marshall	1,663	3,503	1,217	822	7,205	124	23
FLX2001(New) 4X Mid-Late	2,588	2,534	1,280	526	6,928	119	37
FLX2002(La) LR	2,153	2,904	1,220	551	6,828	118	32
FlyingA	2,400	2,555	1,193	593	6,741	116	36
Jackson	2,148	2,712	1,252	626	6,738	116	32
Rio	2,248	2,566	1,253	635	6,702	116	34
Passerel Plus	1,631	3,061	1,233	730	6,655	115	25
WD-40	1,982	3,100	1,106	403	6,591	114	30
FLX2003(BD) 4X LRCT	1,625	2,834	1,376	739	6,574	113	25
Ed	2,074	2,567	1,330	600	6,571	113	32
FL/NEX2002(New2) LRCT	1,812	2,943	1,170	641	6,566	113	28
Matua	970	3,103	1,282	1,086	6,441	111	15
Graze-n-Gro	2,273	2,406	1,211	536	6,426	111	35
FLX2002(New3) LRCT	1,514	3,056	1,228	588	6,386	110	24
Beefbuilder III	1,859	2,472	1,464	547	6,342	109	29
FL/OK2001(New1) LRCT	1,727	2,683	1,340	579	6,329	109	27
Prine	1,680	2,865	1,277	480	6,302	109	27
Stampede	1,916	2,604	1,302	474	6,296	109	30
TXR2004-B8	1,919	2,678	1,186	421	6,204	107	31
WMN97	1,379	3,189	1,021	591	6,180	107	22
TXR2003-2	1,652	2,629	1,265	629	6,175	106	27
Lafayette	1,692	2,740	1,221	520	6,173	106	27
AGR BW101	854	2,841	1,555	897	6,147	106	14
DiamondT	1,804	2,433	1,280	570	6,087	105	30
ME94	1,479	2,845	1,183	573	6,080	105	24
Angus1(4X)	2,054	2,287	1,297	420	6,058	104	34
Tam90	1,796	2,699	1,080	480	6,055	104	30
Mo 1	1,259	3,100	1,065	611	6,035	104	21
TXR2001-11	1,589	2,722	1,136	587	6,034	104	26
King	1,858	2,432	1,271	380	5,941	102	31
Ribeye	1,726	2,397	1,267	518	5,908	102	29
Brigadier	2,010	2,208	1,210	453	5,881	101	34
AGR BP101	519	2,784	1,604	937	5,844	101	9
FLX2003(G) 4X LRLS	1,696	2,248	1,346	534	5,824	100	29
Common	1,535	2,435	1,336	495	5,801	100	26
SG-BL	1,439	2,507	1,253	586	5,785	100	25
Double Barrel (4X)	1,445	2,540	1,245	549	5,779	100	25
BAR9TAMO	1,683	2,650	1,008	399	5,740	99	29
4X	1,365	2,765	1,175	424	5,729	99	24
FLX2000(New) ER	1,833	2,029	1,392	363	5,617	97	33
Jumbo	926	2,919	1,299	427	5,571	96	17
FL/NEX2003(4X) LRCT	1,181	2,672	1,172	532	5,557	96	21
FLX2003(New2) ER	2,012	1,759	1,189	436	5,396	93	37
BAR LWT 0735	1,483	1,783	1,225	504	4,995	86	30
Rockin'R	1,486	1,730	1,188	528	4,932	85	30
LM9929D	1,422	1,858	932	567	4,779	82	30
AGR LM109	821	1,799	1,105	668	4,393	76	19
Archie	871	1,775	1,235	461	4,342	75	20
AGR LM108	725	1,645	932	499	3,801	66	19
Average							
	1,632	2,574	1,232	576	6,014	104	27
L.S.D ¹ (.05)							
	735	441	306	208	993		
C.V. ² (%)							
	32.2	12.3	17.7	25.8	11.8		

¹Least significant difference.²Coefficient of variation.