

Discussion

Thirty-six ryegrass varieties and strains were evaluated for forage production during the 2002–2003 growing season. The fall growing season was not entirely favorable for forage growth but was certainly more desirable than the previous two years. Planting moisture was marginal and stand development was delayed by cooler than normal conditions in October, which reduced growth for much of the fall and early winter. Mild temperatures during much of December and early January allowed for some plant growth and development. However, a few hard freezes in late January, February and early March slowed progression and development. Moisture during the late winter and spring was just adequate to support forage production. In summarizing the growing season, the early maturing varieties undoubtedly were limited in their forage production potential because of the weather factors during the first half of the season. The mid-to-late types may have been limited also by below normal moisture in much of the spring.

Forage was harvested four times during the spring phase of the growing season (Table 1). Overall, only 16 percent of the total forage was harvested on March 10. However, 84 percent of the overall production had been harvested by April 29. Above-normal rainfall and mild temperatures in May stimulated some late growth and a light clipping was taken on May 28. “King” produced the most early forage in the test, while “Graze-N-Gro” was the most productive on the last harvest date (May 28).

Table 2 summarizes the total forage production of common varieties that have been evaluated over the last three seasons. The 2002–2003 average total yield was about 11 percent higher than last year, but about 25 percent lower than the 2001–2002 growing 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.

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, 2000-2003; Ardmore, Oklahoma

Variety	2000-2001	2001-2002	2002-2003	Three-Year Avg. (2000-2003)	Common Annual (%)
Pounds of oven-dry forage per acre					
Marshall	6,661 (8)	5,855 (1)	6,000 (1)	6,172	116
King	6,685 (6)	4,992 (5)	5,966 (2)	5,881	110
Brigadier	6,899 (3)	4,998 (4)	5,479 (4)	5,792	108
Passerel Plus	6,435 (11)	5,205 (2)	5,588 (3)	5,743	108
Jackson	6,619 (9)	4,966 (6)	5,335 (7)	5,640	106
Ed	6,323 (12)	5,142 (3)	5,374 (5)	5,613	105
Stampede	7,047 (1)	4,588 (8)	5,199 (10)	5,611	105
WD-40	6,684 (7)	4,587 (9)	5,361 (6)	5,544	104
Jumbo	6,836 (5)	4,451 (11)	5,273 (8)	5,520	103
Tam 90	6,516 (10)	4,941 (7)	4,925 (12)	5,461	102
Ribeye	6,844 (4)	4,383 (12)	4,986 (11)	5,404	101
Common Annual	6,944 (2)	3,877 (13)	5,205 (9)	5,342	100
Prine (4X)	5,871 (13)	4,587 (10)	4,623 (13)	5,027	94
Average					
	6,643	4,813		5,332	105
L.S.D. ¹ (.05)					
	NS ²	NS	676		

The number in parentheses is the rank within year.

¹Least significant difference.

²Nonsignificant.

Some Influencing Factors

Planting date: Sept. 25, 2002.

Location: Pasture Demonstration Farm, Ardmore, Oklahoma.

Seeding rate: 25 pounds per acre.

Seeding method: Drilled in 7-inch rows and planted at a 1/4 - 1/2-inch depth.

Replications: Four.

Soil type: Chickasha loam.

Management: Sweepled, disked and roller-harrowed.

Fertilization: Preplant – 2 tons per acre of dolomitic lime on Aug. 22, 2002, and 60 pounds N and 50 pounds K2O per acre on Sept. 5, 2002; topdress – 70 pounds N per acre on March 11, 2003.

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 12° F on January 24. 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)
December 25	19	February 7	17
January 17	16	February 24	16
January 23	13	February 25	15
January 24	12	March 6	20
January 27	19		

Rainfall (Inches):

Month	37-year	2001–2002	2002–2003
	Average	Season	Season
September	4.32	11.96	1.34
October	4.38	5.08	4.58
November	2.44	0.98	1.08
December	2.23	2.74	4.73
January	1.67	1.05	0.00
February	2.06	0.94	1.92
March	3.23	4.07	1.63
April	3.49	6.50	1.14
May	5.35	3.03	7.21
Total	29.17	36.35	23.63

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.

I would like to acknowledge the following research support staff for their valuable assistance in the collection and analysis of data and the preparation of this report: Julie Barrick, Bret Flatt, Roger Hartwell, Steve Howe, Shawn Norton and Frank Motal.

2002–2003 FORAGE YIELDS from Ryegrass Varieties and Strains

Jerry L. Baker

The Samuel Roberts
NOBLE FOUNDATION, INC.
2510 Sam Noble Parkway,
Ardmore, Oklahoma 73401

Table 1. Ryegrass forage performance, 2002 – 2003; Pasture Demonstration Farm, Ardmore, Oklahoma.

Variety or strain	Clipping dates				2002- 2003 Total	Common Annual (%)	Forage Produced by 3/10 (%)
	3/10	3/28	4/29	5/28			
Marshall	1,333	2,189	1,620	858	6,000	115	22
King	1,726	1,865	1,613	762	5,966	115	29
ME 94	1,333	2,224	1,518	811	5,886	113	23
Graze-N-Gro	1,211	2,129	1,370	1,079	5,789	111	21
Lonestar	1,325	2,210	1,446	802	5,783	111	23
Passerel Plus	951	2,150	1,664	823	5,588	107	17
Brigadier	1,411	2,103	1,373	592	5,479	105	26
Ed	1,223	2,057	1,347	747	5,374	103	23
WD-40	1,279	2,199	1,385	498	5,361	103	24
Beefbuilder III	1,141	2,191	1,189	830	5,351	103	21
Jackson	957	2,152	1,590	636	5,335	103	18
Magnolia Select	1,070	2,288	1,291	674	5,323	102	20
Jumbo	1,260	2,025	1,264	724	5,273	101	24
SCH-5	902	2,172	1,423	754	5,251	101	17
Southern Star	1,229	2,023	1,177	801	5,230	101	24
Common Annual	1,224	2,226	1,194	561	5,205	100	24
Stampede	1,043	2,131	1,335	690	5,199	100	20
Florlina	766	2,010	1,571	806	5,153	99	15
Ribeye	881	2,070	1,406	629	4,986	96	18
Tam 90	1,017	1,836	1,451	621	4,925	95	21
BB-Mex-1	660	1,763	1,612	621	4,656	90	14
FL/NE X2002 (New2) LRCT	261	1,622	1,704	1,041	4,628	89	6
Prine (4X)	445	1,622	1,644	912	4,623	89	10
FL X2002 (DRU) LRCT	194	1,552	1,836	960	4,542	87	4
Joe-1 (4X)	962	1,732	884	938	4,516	87	21
FL X2002 (LA3) LRCT	178	1,656	1,827	853	4,514	87	4
FL X2002 (New3) LRCT	125	1,454	1,927	1,000	4,506	87	3
FL X2001 4X LR	207	1,534	1,673	1,070	4,484	86	5
ORE-TARX	499	1,637	1,463	872	4,471	86	11
TXR 2003-BL-3	398	1,653	1,635	737	4,423	85	9
FL/OK 2001 LRCT	287	1,454	1,817	864	4,422	85	7
FL X2001 (New1) 4X LR Late	331	1,560	1,530	982	4,403	85	8
Barextra	414	1,520	1,470	911	4,315	83	10
FL X2002 (New) 4X MR	373	1,567	1,402	879	4,221	81	9
FL X2001 (G) 4X ER	104	1,299	1,527	749	3,679	71	3
Barberia	181	1,121	1,261	452	3,015	58	6
Average							
	803	1,861	1,484	793	4,941	95	16
L.S.D ¹ (.05)							
	358	361	333	289	602		
C.V. ² (%)							
	31.8	13.8	16.0	26.0	8.7		

¹Least significant difference.²Coefficient of variation.