



Current Report

PUBLISHED BY OKLAHOMA STATE UNIVERSITY
DISTRIBUTED THROUGH COUNTY EXTENSION OFFICES

FORAGE PRODUCTION FROM SMALL GRAIN, 1979

L. M. Rommann, W. E. McMurphy and F. E. LeGrand
Department of Agronomy

After several years of testing, a variety with a proven record of good or poor forage production may be dropped from the test so newer varieties can be included. This does not mean the dropped variety is no longer an acceptable forage producer. Data from previous Current Reports can be used to compare varieties for those years.

Forage production from small grain during the winter months is very important and essential for the livestock industry in Oklahoma. Cattle gains of $1\frac{1}{4}$ to $1\frac{1}{2}$ pounds per day are easily obtained during the fall, winter, and spring months on small grain pasture. However, good gains are produced during January and February only if forage is available. Very little new growth is produced at this time and one must stockpile sufficient fall growth to carry the cattle through these winter

months. The yields in this report simulate a system where small grains are used for pasture. Forage yields would probably be lower under grazing conditions.

Production is in oven dried pounds of forage per acre. Seasonal production for fall and winter grazing should be an important consideration in selecting varieties. Research has shown that eight pounds of small grain forage produced at these clipping frequencies have been adequate to produce one pound of beef.

Numbered varieties preceded by "OK," "T," or "NF" are experimental varieties. Seed is not currently available.

Coker 68-15 is a soft red winter wheat.

All oat varieties winterkilled at Lahoma and Perkins. Oats were not included in the Goodwell test.

Table 1. Precipitation for each location from August, 1978 through May, 1979.

Month	Location				
	Goodwell	Haskell	Lahoma	Mangum	Perkins
<u>1978</u>					
August	0.02	0.76	1.22	2.20	0.53
September	1.50	0.38	3.25	2.12	0.49
October	0.43	0.81	T	0.03	1.96
November	0.79	4.30	2.25	1.71	3.69
December	0.14	0.77	0.15	0.06	T
<u>1979</u>					
January	0.56	1.31	0.74	1.21	2.11
February	0.00	1.29	0.36	0.49	0.25
March	0.70	2.06	4.67	1.51	3.80
April	0.54	4.18	2.50	1.98	3.42
May	6.10	8.58	4.80	3.43	6.83
Total	10.78 ^{1/}	24.44	19.94	14.74	23.08

1. Irrigated 5 times with 3 inches per application.

Table 2. LAHOMA small grain variety test, forage production (lbs/acre) 1978-79 season. Pond Creek silt loam.

Variety	Harvest Dates		1978-79 Total
	3-30	5-16	
<u>RYE</u>			
Rymin	651	4560	5211
Puma	480	4674	5154
NF 72	1706	3299	5005
NF 500	1102	3484	4586
Bonel	863	3518	4381
Maton	1460	2714	4174
Ath. Abruzzi	1170	2790	3960
Elbon	1091	2442	3533
<u>WHEAT</u>			
Tam W-101	950	5707	6657
Osage	929	5596	6525
Payne	692	5423	6115
Coker 68-15	873	5197	6070
Triumph-64	553	5440	5993
Lancota	803	5188	5991
Vona	596	5378	5974
NF 2	666	5293	5959
Rall	747	4917	5664
Newton	705	4844	5549
<u>BARLEY</u>			
OK 77503	404	5596	6000
OK 77455	354	5391	5745
Kerr	796	4855	5624
OK 77502	214	5372	5586
Post	263	5308	5571
Wintermalt	275	4797	5072
OK 77422	205	4857	5062
Volbar	---	2978	2978
<u>TRITICALE</u>			
T 131	444	5641	6085
T 876	510	5574	6084
OK 77842	517	5521	6038
OK 77802	670	5333	6003
OK 77824	540	5250	5790
T 27029-3	658	4949	5607
OK 77801	310	4932	5242
NF 55	480	4409	4889
LSD (lb/A)	312	722	797
CV (%)	32	11	10

Seeded: October 2, 1978
 Soil Test: ph 5.2, P 76 lb/A, K 458 lb/A,
 NO₃-N 162 lb/A.
 Fertilizer: None.

Table 3. MANGUM small grain variety test, forage production (lbs/acre) 1978-79 season. Meno and Altus loamy fine sand.

Variety	Harvest Dates			1978-79 Total
	3-14	4-2	4-25	
<u>RYE</u>				
Elbon	1539	1795	775	4109
Bonel	849	1390	1089	3328
NF 500	971	1274	1056	3301
Rymin	272	1022	1893	3187
Puma	236	1002	1904	3142
NF 72	514	1314	1209	3037
Maton	971	1153	833	2937
Ath. Abruzzi	775	1212	844	2831
Haiwasse	24	151	501	676
<u>WHEAT</u>				
Osage	374	969	1472	2815
Lancota	203	998	1394	2595
Tam W-101	254	991	1169	2414
Vona	196	938	1256	2390
Triumph 64	76	786	1414	2276
Rall	98	697	1325	2120
Newton	232	760	991	1983
NF 2	171	552	1241	1964
Coker 68-15	227	648	802	1677
Payne	27	583	944	1554
<u>BARLEY</u>				
Kerr	227	976	1989	3192
OK 77502	87	779	1953	2819
OK 77455	143	944	1693	2780
Post	64	434	1496	1994
OK 77503	47	461	1407	1915
OK 77422	64	399	1387	1850
Wintermalt	15	285	1254	1554
Volbar	----	51	786	837
<u>TRITICALE</u>				
OK 77802	149	819	1378	2346
OK 77842	87	771	1287	2145
T 27029-3	83	699	1339	2121
T 131	58	692	1267	2017
T 876	31	641	1323	1995
OK 77824	42	546	1252	1840
OK 77801	34	347	955	1336
NF 55	7	443	842	1292
<u>OATS</u>				
Cimmarron	----	74	730	804
Walken	----	40	610	650
Okay	----	94	534	628
Bob	----	147	365	512
Nora	----	----	383	383
LSD (lb/A)	466	513	435	800
CV (%)	56	44	24	27

Seeded: October 6, 1978
 Soil Test: ph 5.9, P 58 lb/A, K 268 lb/A
 Fertilizer: 15-30-15 October 5, 1978
 40- 0- 0 March 15, 1979
 40- 0- 0 April 3, 1979

Table 4. HASKELL small grain variety test, forage production (lbs/acre) 1978-79 season. Taloka soil.

Variety	Harvest Dates					1978-79 Total
	11-29	3-26	4-13	5-9	5-31	
RYE						
NF 72	1465	2677	996	3004	---	8142
NF 500	839	2917	935	3280	---	7971
Bonel	1437	2840	1044	2338	---	7659
Maton	1303	2958	880	2394	---	7535
Ath. Abruzzi	1577	2401	635	2675	---	7288
Elbon	1276	2768	708	2521	---	7273
Rymin	715	1828	2245	1563	---	6351
Puma	270	1468	2753	1788	---	6279
WHEAT						
Osage	372	1676	2260	1387	---	5694
Vona	280	1512	2543	1356	---	5691
Lancota	515	1811	1341	1788	---	5455
TAM W-101	201	1751	1673	1499	---	5124
Payne	419	1234	1830	1517	---	5000
Rall	290	1372	1663	1606	---	4931
Triumph 64	650	1408	1726	1123	---	4907
Coker 68-15	1683	986	973	993	---	4635
Newton	136	1423	1677	1261	---	4497
NF 2	623	1289	900	1552	---	4364
BARLEY						
WinTermalt	840	390	2015	4488	---	7733
OK 77502	1069	844	1811	3888	---	7612
OK 77455	790	592	1301	4144	---	6827
Post	623	472	1142	4572	---	6809
Kerr	973	1093	1445	3138	---	6649
OK 77422	577	265	955	4031	---	5828
Volbar	1349	---	561	3463	---	5373
OK 77503	372	795	1750	2347	---	5264
OATS						
Walken	180	490	750	4420	---	5840
Cimarron	319	---	481	3683	---	4483
Okay	677	---	267	3156	---	4100
Coker 234	252	---	---	2675	---	2927
Bob	1447	---	---	1430	---	2877
Cumberland	89	---	---	1810	---	1899
TRITICALE						
OK 77824	428	1459	1552	3476	---	6915
T 876	---	1147	2363	3078	---	6588
OK 77802	394	1341	1517	2821	---	6073
T 131	71	1109	2307	2338	---	5825
OK 77842	521	1160	1889	1726	---	5296
T 27029-3	554	1200	1712	1641	---	5107
OK 77801	713	617	1040	2218	---	4588
NF 55	1325	617	909	1452	---	4303
OTHER						
Gulf Ryegr.	---	---	1835	4421	365	6621
Linn Per. Ryegr.	---	---	1828	4209	472	6509
Aubade Ryegr.	---	---	670	4026	909	5605
Wintergreen Ann. Ryegr.	---	---	---	2365	396	2761
LSD (1b/A)	339	379	388	1052	241	1220
CV (%)	35	19	19	29	28	15

Seeded: August 30, 1978.
Soil Test: pH 5.8, P 29 lb/A, K 170 lb/A, NO₃-N 22 lb/A.
Fertilizer: 60-60-60 Aug. 30, 1978.

Table 5. PERKINS small grain variety test, forage production (lbs/acre) 1978-79 season. Teller loam.

Variety	Harvest Dates				1978-79 Total
	12-12	4-5	5-1	6-5	
RYE					
NF 500	1584	2160	1323	643	5710
NF 72	1757	1820	1334	613	5524
Bonel	860	2360	1663	635	5518
Maton	1205	1973	1390	570	5138
Puma	672	1637	2586	207	5102
Ath. Abruzzi	1450	1653	1314	350	4767
Rymin	900	1412	2258	116	4686
Elbon	1427	1619	947	---	3993
WHEAT					
Rall	1036	1949	1724	---	4709
Lancota	760	1737	1830	290	4617
Osage	748	1555	2044	---	4347
Vona	662	1554	2105	---	4321
Triumph-64	944	1771	1519	---	4234
Newton	739	1590	1790	---	4119
Payne	713	1492	1824	---	4029
TAM W-101	686	1644	1628	---	3958
NF 2	853	875	2089	---	3817
Coker 68-15	466	1082	1998	---	3546
BARLEY					
Kerr	1122	541	1664	---	3327
Wintermalt	1309	162	1688	---	3159
OK 77502	973	296	1886	---	3155
Post	1134	294	1621	---	3049
OK 77503	1258	231	1488	---	2977
OK 77422	1202	136	1245	---	2583
OK 77455	1078	180	1300	---	2558
Volbar	817	62	982	---	1861
OATS					
Coker 234	1071	---	---	---	1071
Okay	1067	---	---	---	1067
Bob	1011	---	---	---	1011
Walken	924	---	---	---	924
Cimarron	918	---	---	---	918
Cumberland	506	---	---	---	506
TRITICALE					
T 876	486	1554	3138	403	5581
T 131	791	1581	2394	463	5229
OK 77842	764	1423	2245	430	4862
OK 77824	984	1118	2026	408	4536
OK 77802	842	1145	2156	345	4488
T 27029-3	869	1151	1949	198	4167
NF 55	1245	481	1392	---	3118
OK 77801	1033	466	1610	---	3109
OTHER					
Linn Per. Ryegr.	548	521	3975	635	5679
Gulf Ann. Ryegr.	877	109	2410	2067	5463
Aubade Ryegr.	1104	167	1744	1554	4569
Wintergreen Ann. Ryegr.	368	114	2514	1138	4134
LSD (1bs/A)	367	290	408	711	943
CV (%)	28	18	15	37	18

Seeded: August 25, 1978, Emerged Sept. 21, 1978.
Soil Test: pH 5.5, P 52 lb/A, K 240 lb/A, NO₃-N 22 lb/A.
Fertilizer: 60-80-0 Aug. 24, 1978
60-0-0 Dec. 18, 1978
60-0-0 Apr. 9, 1979

Table 6. GOODWELL small grain variety test, forage production (lbs/acre) 1978-79 season. Richfield clay loam.

Variety	Harvest Dates					1978-79 Total
	10-12	12-13	3-27	4-19	5-29	
RYE						
Puma	1678	720	1586	3534	2812	10330
Maton	1798	599	2144	1953	3209	9703
Rymin	1544	856	1470	2684	3107	9661
Bonel	2010	656	1795	2050	2943	9454
NF 72	2103	433	1732	2089	3057	9414
NF 500	1646	533	1687	2105	2956	8927
Elbon	1448	468	2096	1706	3208	8926
Ath. Abruzzi	1594	643	1601	1725	2720	8283
WHEAT						
Lancota	1351	563	1260	2627	4112	9913
Payne	1600	581	893	2351	3543	8968
Osage	1426	647	1265	2747	2519	8604
Triumph 64	1309	713	1046	2532	2927	8527
Vona	1416	775	1055	2656	2559	8461
TAM W-101	1497	675	1270	2437	2535	8414
NF 2	1262	465	---	1857	4731	8315
Rall	1621	438	1140	2388	2535	8122
Newton	1180	564	1117	2384	2683	7928
Coker 68-15	1095	592	872	2107	2454	7120
BARLEY						
Wintermalt	2274	636	736	2127	5640	11413
OK 77455	2325	398	741	2452	4965	10881
OK 77422	1482	504	517	2480	5346	10329
Kerr	2397	485	985	2744	3714	10325
Post	1342	581	827	2218	5344	10312
OK 77502	1088	633	939	2925	4355	9940
Volbar	2192	567	268	2200	4379	9606
OK 77503	1099	584	716	2474	4600	9473
TRITICALE						
OK 77842	1608	878	1129	2292	4235	10142
T 876	1701	666	1102	3103	3387	9959
OK 77802	1612	593	947	1972	4151	9275
T 131	1585	631	1087	2529	3013	8845
OK 77824	1741	664	---	1380	4880	8665
NF 55	1727	414	---	1664	4131	7936
T 27039-3	1400	466	628	2061	3173	7728
OK 77801	1647	581	---	704	3871	6803
LSD (1b/A)	707	304	421	493	1197	1861
CV (%)	31	36	25	15	23	14

Seeded: August 30, 1978
Soil Test: pH 7.5, P 38 lb/A, K 810 lb/A, NO₃-N 226 lb/A
Fertilizer: 80-40-0 Oct. 17, 1978
60-0-0 Dec. 14, 1978
60-0-0 Mar. 28, 1978
60-0-0 Apr. 20, 1978

Table 7. Summary of total production (lbs/acre) of small grain forage from five locations, 1978-79 season.

Variety	Locations					Average ^{1/}	
	Goodwell	Haskell	Lahoma	Mangum	Perkins	5 Loc.	4 Loc.
RYE							
NF 72	9414	8142	5005	3037	5524	6224	5427
NF 500	8927	7971	4586	3301	5710	6099	5392
Bonel	9454	7659	4381	3328	5518	6068	5221
Maton	9703	7535	4174	2937	5138	5897	4946
Puma	10330	6279	5154	3142	5102	6001	4919
Rymin	9661	6351	5211	3187	4686	5819	4859
Elbon	8926	7273	3533	4109	3993	5567	4727
Ath. Abruzzi	8283	7288	3960	2831	4767	5426	4712
WHEAT							
Osage	8604	5694	6525	2815	4347	5597	4845
Lancota	9913	5455	5991	2595	4617	5714	4665
Vona	8461	5691	5974	2390	4321	5367	4594
TAM W-101	8414	5124	6657	2414	3958	5313	4538
Rall	8122	4931	5664	2120	4709	5109	4356
Triumph 64	8527	4907	5993	2279	4234	5187	4352
Payne	8968	5000	6115	1554	4029	5133	4175
Newton	7928	4497	5549	1983	4119	4815	4037
NF 2	8315	4364	5959	1964	3817	4884	4026
Coker 68-15	7120	4635	6070	1677	3546	4610	3982
BARLEY							
OK 77502	9940	7612	5586	2819	3155	5822	4793
Kerr	10325	6649	5624	3192	3327	5823	4698
OK 77455	10881	6827	5745	2780	2558	5758	4478
Wintermalt	11413	7733	5072	1554	3159	5786	4380
Post	10312	6809	5571	1994	3049	5547	4356
OK 77503	9473	5264	6000	1915	2977	5126	4039
OK 77422	10329	5828	5062	1850	2583	5130	3831
Volbar	9606	5373	2978	837	1861	4131	2762
OATS							
Walken	---	5840	0	650	924	---	1854
Cimarron	---	4483	0	804	918	---	1551
Okay	---	4100	0	628	1067	---	1449
Bob	---	2877	0	512	1011	---	1100
Coker 234	---	2927	0	---	1071	---	---
Cumberland	---	1899	0	---	506	---	---
Nora	---	---	---	383	---	---	---
TRITICALE							
T 876	9959	6588	6084	1995	5581	6041	5062
T 131	8845	5825	6085	2017	5229	5600	4789
OK 77824	8665	6915	5790	1840	4536	5549	4770
OK 77802	9275	6073	6003	2346	4488	5637	4728
OK 77842	10142	5296	6038	2145	4862	5697	4585
T 27029-3	7728	5107	5607	2121	4167	4946	4251
OK 77801	6803	4588	5242	1336	3109	4216	3569
NF 55	7936	4303	4889	1292	3118	4308	3401
OTHER							
Linn Per. Ryegr.	---	6509	---	---	5679	---	---
Gulf Ann. Ryegr.	---	6621	---	---	5463	---	---
Aubade Ryegr.	---	5605	---	---	4569	---	---
Wintergreen	---	---	---	---	---	---	---
Ann. Ryegr.	---	2761	---	---	4134	---	---

1. Average for 4 locations does not include Goodwell, the irrigated test.

Oklahoma State Cooperative Extension Service does not discriminate because of race, color, or national origin in its programs and activities, and is an equal opportunity employer. Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Frank H. Baker, Director of Cooperative Extension Service, Oklahoma State University, Stillwater, Oklahoma. This publication is printed and issued by Oklahoma State University as authorized by the Dean of the Division of Agriculture and has been prepared and distributed at a cost of \$430.50 for 11,600 copies. 0879.