



Current Report

Cooperative Extension Service • Division of Agriculture • Oklahoma State University

Forage Production From Small Grain, 1984

D.S. Howle, W.E. McMurphy and L.M. Rommann
Department of Agronomy

Forage production from small grain during the winter months is very important and essential for the livestock industry in Oklahoma. Cattle gains of $1\frac{1}{2}$ 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. Cuttings at each location continued until there was no longer any regrowth. 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.

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

Table 1. Precipitation for each location from August, 1983 through May, 1984.

Month	Locations				
	Goodwell*	Haskell	Lahoma	Mangum	Perkins
<u>1983</u>	inches				
August	0.76	0.44	1.41	1.24	1.06
September	0.07	2.29	3.74	0.89	2.20
October	4.39	8.09	4.74	11.01	10.01
November	0.82	3.43	0.81	1.38	1.69
December	0.64	0.35	0.31	0.47	0.41
<u>1984</u>					
January	0.16	0.79	0.12	0.01	0.44
February	1.07	3.29	1.85	1.14	0.93
March	1.56	4.48	6.15	1.14	5.78
April	2.25	3.72	3.29	1.82	3.64
May	1.23	6.08	1.17	0.48	3.86
Total	12.95	32.96	23.59	19.58	30.02

* Irrigated five times, 11" total.

Table 2. PERKINS small grain variety test, forage production (lbs/acre) and crude protein (%) 1983-84 season. Teller loam.

Variety	Harvest Dates			Total
	12-16	4-17	5-23	
<u>WHEAT</u>				
Bounty 100	--	5879	2131	8009
Sandy	--	5542	2400	7942
Hawk	--	4976 (12.6)*	2862 (14.2)	7838
TAM 105	--	4689 (13.0)	2887 (14.1)	7576
Scout 66	--	5512 (13.1)	1950 (14.9)	7462
Triumph 64	--	5251 (11.6)	2208 (14.1)	7459
Centurk 78	--	4987 (11.1)	2462 (15.2)	7449
OK 80019	--	4497	2871	7369
Russian	--	5014 (13.3)	2182 (16.8)	7196
Osage	--	4437 (14.0)	2700 (14.7)	7137
OK 79256	--	5473	1659	7132
Payne	--	4274 (14.7)	2786 (16.0)	7059
Vona	--	4937 (12.8)	2050 (14.9)	6987
OK 79257	--	5879	1092	6971
Chisholm	--	4864 (12.7)	2000 (14.6)	6864
Wings	--	4391 (11.8)	2462 (15.0)	6853
NK 835	--	4451	2259	6710
OK 80268	--	4316	2382	6698
Danne	--	4714 (11.4)	1845 (14.4)	6560
TAM 101	--	4939 (11.6)	1601 (18.6)	6541
Concho	--	4238 (13.9)	2219 (16.2)	6457
Newton	--	4461 (11.9)	1900 (18.2)	6362
Arthur 71	--	4718	1626	6344
<u>RYE</u>				
Bone1	1586	3599 (12.0)	2125 (14.8)	7309
<u>TRITICALE</u>				
Sunblest	--	5159 (13.7)	2912 (16.6)	8071
<u>RYEGRASS</u>				
Gulf	1512	824	2981	5318
<u>OATS</u>				
Lang	1793	--	--	1793
LSD (1b/A)	626	755 (2.3)	620 (1.4)	897
CV (%)	22	11 (13.0)	20 (6.3)	9

Seeded: September 22, 1983
 Soil Test: pH 5.4, P 38 lb/A, K 174 lb/A, NO₃-N 12 lb/A
 Fertilizer: 60-0-0 September 8, 1983
 50-0-0 April 24, 1984

* crude protein percentage

Table 3. LAHOMA small grain variety test, forage production (lbs/acre) 1983-84 season. Pond Creek silt loam.

Variety	Harvest Dates				Total
	2-3	4-5	5-1	6-4	
<u>WHEAT</u>					
Sandy	520	1795	2553	1924	6792
Hawk	375	2061	1776	2232	6443
Arthur 71	929	1942	1643	1576	6090
Osage	--	1605	2225	2255	6085
Russian	1140	1962	1518	1420	6039
OK 79257	419	2177	1085	2284	5964
NK 835	189	1854	2171	1748	5962
TAM 101	307	2346	709	2596	5958
TAM 105	9	1945	1886	1989	5829
Vona	75	1763	1896	2025	5760
OK 79256	360	2098	1055	2076	5589
Wings	8	1897	1634	2037	5577
OK 80019	60	1489	2252	1623	5424
OK 80268	257	1741	1865	1560	5423
Bounty 100	203	1906	1027	2265	5401
Triumph 64	341	2097	1228	1526	5192
Chisholm	24	1828	1763	1471	5087
<u>RYE</u>					
Bone1	2421	2985	604	1087	7097
<u>TRITICALE</u>					
Sunblest	358	2300	2492	1930	7079
<u>OATS</u>					
Lang	1144	--	--	--	1144
LSD (1b/A)	375	518	416	392	915
CV (%)	58	18	18	15	11

Seeded: September 19, 1983
 Fertilizer: 60-0-0 Feb. 15, 1984
 70-0-0 Apr. 6, 1984

Table 5. MANGUM small grain variety test, forage production (lb/acre) 1983-84 season. Meno and Altus loamy fine sand.

Variety	Harvest Dates		Total
	4-12	5-8	
<u>WHEAT</u>			
TAM 101	704	318	1022
Sandy	459	511	970
OK 80019	508	415	923
Vona	551	367	918
Bounty 100	528	381	910
Osage	463	435	898
OK 79256	556	286	842
Russian	604	237	841
Triumph 64	541	291	832
OK 80268	443	362	804
OK 79257	539	259	798
TAM 105	389	353	743
Wings	446	282	728
Chisholm	477	235	713
Hawk	393	236	630
Golden Acres 522	428	195	624
NK 835	408	189	597
Arthur 71	348	192	540
<u>RYE</u>			
Bonel	2372	420	2792
<u>TRITICALE</u>			
Sunblest	606	748	1354
<u>OATS</u>			
Lang	--	--	--
LSD (1b/A)	391	204	489
CV (%)	47	43	37

Seeded: October 3, 1983
 Fertilizer: 40-0-0 Sept. 29, 1983
 40-0-0 Mar. 8, 1984

Table 4. HASKELL small grain variety test, forage production (lbs/acre) 1983-84 season. Taloka soil.

Variety	Harvest Dates					Total
	11-16	3-22	4-17	5-17	6-7	
<u>WHEAT</u>						
NK 835	861	1397	2316	--	--	4573
Osage	612	1248	2357	--	--	4218
Sandy	983	1155	1991	--	--	4129
Hawk	915	1190	1999	--	--	4104
Wings	775	1397	1896	--	--	4068
Vona	474	1316	2246	--	--	4037
OK 80019	1072	1159	1711	--	--	3942
OK 80268	1173	1002	1676	--	--	3851
TAM 105	223	1100	2521	--	--	3843
Arthur 71	1277	1003	1517	--	--	3797
Triumph 64	998	1149	1542	--	--	3690
Chisholm	783	1097	1762	--	--	3642
OK 79257	707	1401	1388	--	--	3496
OK 79256	792	1197	1484	--	--	3474
TAM 101	540	1239	1695	--	--	3474
Russian	1031	782	1322	--	--	3134
Bounty 100	314	1469	1340	--	--	3123
<u>RYE</u>						
Bonel	1676	2950	723	1990	--	7339
<u>TRITICALE</u>						
Sunblest	381	1609	3006	1852	--	6848
<u>RYEGRASS</u>						
Gulf	--	73	2004	4573	103	6753
<u>OATS</u>						
Lang	1777	--	--	--	--	1777
LSD (1b/A)	218	170	302	170	--	405
CV (%)	19	10	12	28	--	7

Seeded: September 16, 1983
 Soil Test: pH 4.9, P 58 lb/A, K 205 lb/A, NO₃-N 116 lb/A
 Fertilizer: 100-80-80 Sept. 15, 1983
 60-0-0 Mar. 23, 1984

Table 6. GOODWELL small grain variety test, forage production (lbs/acre) 1983-84 season. Richfield clay loam Irrigated.

Variety	Harvest Dates									Total
	10-12	11-4	2-22	3-15	4-12	4-25	5-8	5-23	6-6	
<u>WHEAT</u>										
OK 80019	1149	1242	1296	1879	2012	1540	1249	755	459	11582
Sandy	1447	1653	1532	1978	1801	1590	935	301	--	11238
OK 80268	1166	1005	1137	1998	1688	1549	1193	660	410	10806
TAM 105	1234	1457	1047	1850	1648	1665	987	352	--	10240
Hawk	1458	1398	972	1931	1730	1386	1035	161	--	10070
Triumph 64	1258	1081	1151	1836	2050	1294	847	534	--	10050
Osage	978	1214	1050	1880	1876	1607	872	338	--	9816
Wings	1301	1230	1225	1743	1552	1418	970	310	--	9749
Bounty 100	1587	1406	1306	1511	1466	1188	914	283	--	9661
Chisholm	1018	1472	1284	1610	1653	1489	782	347	--	9655
NK 835	1130	1160	989	1889	1694	1253	968	411	--	9493
OK 79257	1070	1502	1131	2089	1445	1129	755	106	--	9228
OK 79256	1405	1056	1236	1703	1542	1198	842	218	--	9201
Vona	942	1030	956	1618	1646	1465	991	250	--	8896
Russian	1534	1020	788	1402	1413	1105	836	256	--	8354
TAM 101	1206	1170	966	1480	1534	1021	798	160	--	8334
Arthur 71	775	614	622	1563	1546	1309	914	318	--	7661
<u>RYE</u>										
Bone1	907	965	1635	2378	1795	1246	912	365	167	10371
<u>TRITICALE</u>										
Sunblest	1215	1646	1943	2166	2462	1785	1466	1018	507	14209
LSD (1b/A)	381	543	533	508	507	314	143	194	185	1467
CV (%)	22	31	32	20	21	16	11	36	161	10

Seeded: August 19, 1983

Soil Test: pH 6.8, P 59 lb/A, K 828 lb/A, NO₃-N 118 lb/A

Fertilizer: 60-40-0 Aug. 1, 1983

60-0-0 Feb. 6, 1984

60-0-0 Mar. 15, 1984