



Current Report

Cooperative Extension Service • Division of Agriculture • Oklahoma State University

FULL SEASON FORAGE PRODUCTION FROM SMALL GRAINS - 1990

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Exceptionally heavy rainfall during the summer of 1989 resulted in good seedbed conditions and early wheat planting. Above normal quantities of forage were present by early November, however, lack of rainfall during late October through December led to drought stress and little additional forage

production from early November until mid-December. Just before Christmas a severe cold front passed through the state freezing back nearly all wheat top growth and no new growth occurred until after rains started about January 15, 1990. The mid-January rains were followed by unusually wet weather until May.

THIS YEAR'S TESTS INCLUDE THE FOLLOWING:

HARD RED WINTER WHEAT PURE LINE VARIETIES

| BRAND | ENTRY | BRAND | ENTRY | BRAND | ENTRY |
|---------|-------------|---------|----------|-------|------------|
| Agripro | Abilene | - | Century | - | Siouxland |
| Agripro | Mesa | - | Chisholm | - | TAM 107 |
| Agripro | Stallion | - | Cimarron | - | TAM 200 |
| Agripro | Thunderbird | - | Karl | - | TAM W-101 |
| AGSECO | 7846 | Pioneer | 2157 | - | Triumph 64 |
| - | Arkan | Pioneer | 2180 | | |

HARD RED WINTER WHEAT PURE LINE EXPERIMENTALS¹

| | | | |
|-----------|-----------|-----------|-----------|
| OK 84286 | OK 89G902 | OK 89G904 | OK 89G906 |
| OK 89G901 | OK 89G903 | OK 89G905 | |

HARD RED WINTER WHEAT HYBRID

Quantum 554

SOFT RED WINTER WHEAT PURE LINE VARIETY

Coker 97-66

RYE VARIETY

Bonel

RYE EXPERIMENTALS¹

NF 222 NF 14 NF 109 NF 125

TRITICALE

Newcale

¹Seed is not currently available to producers.

Forage production from small grain during the winter months is very important and essential for the livestock industry in Oklahoma. Excellent cattle gains are obtained on small grain pasture during January and February only if adequate forage and/or supplement is available. Very little new wheat growth is produced at this time and sufficient fall growth must be stockpiled 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 are presented in oven dried pounds of forage per acre.

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.

Additional information about wheat varieties can be found in CR-2114 which summarizes information on fall and winter forage production and CR-2115 contains information about grain production.

Precipitation for each location from August, 1989, through May, 1990.

| Month | Location | | | | |
|--------------|--------------------|--------------|--------------|--------------|--------------|
| | Goodwell* | Haskell | Lahoma | Tipton** | Perkins |
| | ----- inches ----- | | | | |
| <u>1989</u> | | | | | |
| August | 2.98 | 2.57 | 8.03 | 2.01 | 4.49 |
| September | 1.84 | 2.03 | 2.50 | 5.26 | 4.54 |
| October | 0.03 | 1.44 | 2.35 | 0.80 | 2.77 |
| November | 0 | 0.11 | 0.01 | 0 | 0.05 |
| December | 0.13 | 0.45 | 0.06 | 0.06 | 0.55 |
| <u>1990</u> | | | | | |
| January | 0.94 | 4.07 | 1.62 | 1.55 | 1.42 |
| February | 0.93 | 3.09 | 2.74 | 2.86 | 4.12 |
| March | 0.63 | 5.44 | 3.27 | 4.06 | 6.77 |
| April | 1.40 | 7.64 | 3.51 | 3.40 | 8.20 |
| May | 2.60 | 7.38 | 2.43 | 3.12 | 3.76 |
| Total | 11.48 | 34.22 | 26.52 | 23.12 | 36.67 |

*Irrigated three times, 9-inches total.
 **Data from Altus, the nearest weather station.

TIPTON small grain variety test, forage
production (lbs/acre) 1989-90 season.
Tipton silt loam soil.

| BRAND | ENTRY | Harvest Dates | | | Total |
|--------------|-------------|---------------|------|------|-------|
| | | 3-8 | 4-12 | 5-14 | |
| <u>WHEAT</u> | | | | | |
| - | Siouxland | 1802 | 2164 | 554 | 4519 |
| AGSECO | 7846 | 1677 | 2058 | 770 | 4505 |
| - | Century | 1536 | 1727 | 944 | 4207 |
| - | OK 89G903 | 2131 | 1493 | 549 | 4172 |
| Agripro | Thunderbird | 1397 | 1847 | 906 | 4150 |
| - | Cimarron | 1579 | 1721 | 676 | 3976 |
| - | Triumph 64 | 1618 | 1874 | 429 | 3921 |
| Agripro | Mesa | 1746 | 1424 | 685 | 3855 |
| - | Karl | 1324 | 1660 | 731 | 3715 |
| - | TAM W-101 | 1215 | 1382 | 1104 | 3701 |
| Agripro | Abilene | 1470 | 1666 | 541 | 3678 |
| Quantum | 554 | 2026 | 1243 | 355 | 3624 |
| - | Arkan | 1521 | 1422 | 569 | 3512 |
| - | OK 89G902 | 1357 | 1459 | 563 | 3379 |
| Agripro | Stallion | 1467 | 1454 | 446 | 3367 |
| - | OK 84286 | 1375 | 1457 | 507 | 3338 |
| - | OK 89G901 | 1945 | 1032 | 270 | 3246 |
| - | Chisholm | 1533 | 1369 | 336 | 3237 |
| - | OK 89G904 | 1302 | 1136 | 729 | 3167 |
| - | TAM 107 | 1188 | 1503 | 423 | 3114 |
| - | OK 89G906 | 1407 | 1058 | 617 | 3082 |
| - | TAM 200 | 1396 | 1039 | 640 | 3075 |
| Coker | 97-66 | 1286 | 1067 | 687 | 3040 |
| - | OK 89G905 | 1099 | 1170 | 582 | 2850 |
| <u>RYE</u> | | | | | |
| - | Bone1 | 1819 | 2644 | 345 | 4807 |
| - | NF 109 | 1978 | 2042 | 491 | 4511 |
| - | NF 14 | 2131 | 1775 | 414 | 4320 |
| - | NF 125 | 1971 | 1621 | 504 | 4096 |
| - | NF 222 | 1358 | 1569 | 578 | 3505 |
| Average | | 1574 | 1554 | 584 | 3713 |
| LSD (0.05) | | NS | 683 | NS | 1127 |
| CV (%) | | 34 | 31 | 58 | 22 |

Planted: September 20, 1989
Fertilizer: 68-0-0 March 8, 1990
68-0-0 April 12, 1990

HASKELL small grain variety test, forage
production (lbs/acre) 1989-90 season.
Taloka soil.

| BRAND | ENTRY | Harvest Dates | | | Total |
|--------------|-------------|---------------|------|------|-------|
| | | 10-31 | 3-19 | 5-10 | |
| <u>WHEAT</u> | | | | | |
| - | Century | 682 | 1285 | 3117 | 5084 |
| - | Siouxland | 886 | 1846 | 2039 | 4771 |
| - | OK 89G905 | 1203 | 1268 | 2276 | 4747 |
| - | OK 89G906 | 1153 | 1200 | 2383 | 4736 |
| Agripro | Abilene | 747 | 1258 | 2545 | 4550 |
| - | Karl | 957 | 1408 | 2146 | 4512 |
| Quantum | 554 | 1192 | 1111 | 2145 | 4448 |
| - | Chisholm | 1355 | 1379 | 1638 | 4372 |
| Agripro | Stallion | 1212 | 1220 | 1902 | 4334 |
| - | OK 89G903 | 1126 | 1709 | 1442 | 4278 |
| Pioneer | 2157 | 1114 | 1183 | 1857 | 4154 |
| Triumph | 64 | 965 | 1329 | 1814 | 4108 |
| Agripro | Thunderbird | 561 | 1600 | 1941 | 4102 |
| - | OK 89G904 | 1051 | 1617 | 1315 | 3982 |
| - | TAM 200 | 649 | 1831 | 1476 | 3956 |
| - | OK 84286 | 577 | 1498 | 1874 | 3949 |
| Coker | 97-66 | 1084 | 1532 | 1314 | 3930 |
| AGSECO | 7846 | 684 | 1661 | 1385 | 3730 |
| - | OK 89G901 | 665 | 1476 | 1540 | 3681 |
| Pioneer | 2180 | 990 | 1890 | 791 | 3671 |
| Agripro | Mesa | 367 | 1909 | 1394 | 3670 |
| - | OK 89G902 | 722 | 1398 | 1538 | 3657 |
| - | TAM 107 | 560 | 1622 | 1448 | 3630 |
| - | Arkan | 966 | 1535 | 1092 | 3593 |
| - | Cimarron | 520 | 1383 | 1483 | 3387 |
| - | TAM W-101 | 275 | 1570 | 1293 | 3139 |
| <u>RYE</u> | | | | | |
| - | NF 125 | 2706 | 3876 | 1320 | 7902 |
| - | NF 14 | 2052 | 3753 | 1572 | 7377 |
| - | Bone1 | 2176 | 3610 | 1252 | 7038 |
| - | NF 109 | 1829 | 3463 | 1662 | 6953 |
| - | NF 222 | 784 | 1350 | 2024 | 4159 |
| Average | | 1026 | 1767 | 1710 | 4503 |
| LSD (0.05) | | 222 | 274 | 355 | 514 |
| CV (%) | | 15 | 11 | 15 | 8 |

Planted: September 5, 1989
Fertilizer: 60-0-0 November 3, 1989
60-0-0 March 21, 1990

GOODWELL small grain variety test, forage production (lbs/acre)
1989-1990 season. Richfield clay loam.

| BRAND | ENTRY | Harvest Dates | | | | | | Total |
|--------------|-------------|---------------|------|------|------|------|-----|-------|
| | | 11-12 | 12-4 | 3-13 | 4-9 | 4-23 | 5-8 | |
| <u>WHEAT</u> | | | | | | | | |
| - | OK 84286 | 1261 | 515 | 1342 | 1692 | 480 | 303 | 5592 |
| Pioneer | 2157 | 1131 | 704 | 1311 | 1374 | 583 | 350 | 5453 |
| - | Siouxland | 907 | 994 | 1121 | 1189 | 975 | 247 | 5433 |
| - | Cimarron | 1022 | 583 | 1295 | 1497 | 571 | 399 | 5367 |
| Agripro | Stallion | 1296 | 507 | 1223 | 1506 | 444 | 378 | 5355 |
| - | TAM 200 | 1274 | 531 | 1077 | 1702 | 507 | 252 | 5343 |
| - | OK 89G901 | 1191 | 1048 | 1157 | 1144 | 506 | 221 | 5266 |
| - | Karl | 1359 | 819 | 1132 | 1101 | 558 | 257 | 5226 |
| - | OK 89G902 | 1373 | 692 | 855 | 1379 | 690 | 207 | 5196 |
| - | Chisholm | 1121 | 628 | 1392 | 1325 | 454 | 270 | 5190 |
| Coker | 97-66 | 1301 | 824 | 1117 | 1001 | 640 | 210 | 5092 |
| - | OK 89G903 | 1127 | 778 | 1131 | 1382 | 462 | 196 | 5075 |
| Agripro | Abilene | 929 | 759 | 909 | 1334 | 800 | 309 | 5039 |
| Pioneer | 2180 | 1130 | 812 | 1254 | 1165 | 410 | 243 | 5015 |
| - | TAM 107 | 1028 | 740 | 1137 | 1137 | 733 | 235 | 5010 |
| - | OK 89G905 | 1499 | 586 | 1098 | 1053 | 365 | 273 | 4874 |
| - | OK 89G906 | 1158 | 484 | 835 | 1403 | 574 | 383 | 4835 |
| - | TAM W-101 | 1309 | 893 | 1072 | 951 | 417 | 190 | 4832 |
| - | OK 89G904 | 1361 | 625 | 1165 | 1021 | 397 | 221 | 4790 |
| - | Triumph 64 | 907 | 634 | 1150 | 1449 | 354 | 271 | 4765 |
| Quantum | 554 | 1381 | 523 | 777 | 1338 | 456 | 280 | 4755 |
| - | Arkan | 1012 | 548 | 952 | 1351 | 534 | 273 | 4669 |
| Agripro | Mesa | 824 | 419 | 991 | 1402 | 628 | 374 | 4638 |
| Agripro | Thunderbird | 991 | 521 | 955 | 1271 | 598 | 236 | 4572 |
| AGSECO | 7846 | 1070 | 519 | 876 | 1246 | 445 | 365 | 4521 |
| - | Century | 674 | 389 | 902 | 1280 | 778 | 290 | 4313 |
| <u>RYE</u> | | | | | | | | |
| - | Bone1 | 1497 | 564 | 2358 | 1470 | 415 | 138 | 6441 |
| - | NF 109 | 1268 | 652 | 1698 | 1295 | 496 | 257 | 5666 |
| - | NF 125 | 1056 | 543 | 1638 | 1337 | 378 | 145 | 5098 |
| - | NF 14 | 922 | 509 | 1534 | 1620 | 365 | 147 | 5097 |
| - | NF 222 | 703 | 370 | 1042 | 1185 | 603 | 242 | 4145 |
| Average | | 1137 | 649 | 1184 | 1309 | 539 | 266 | 5083 |
| LSD (0.05) | | NS | NS | 469 | NS | 245 | 139 | NS |
| CV (%) | | 40 | 39 | 24 | 28 | 28 | 32 | 16 |

Planted: September 8, 1989
Fertilizer: 60-0-0 November 14, 1989
70-0-0 March 19, 1990

LAHOMA small grain variety test, forage production
(lbs/acre) 1989-90 season. Pond Creek silt loam.

| BRAND | ENTRY | Harvest Dates | | | | | Total |
|--------------|-------------|---------------|-----|------|------|------|-------|
| | | 10-19 | 1-5 | 3-13 | 4-12 | 5-24 | |
| <u>WHEAT</u> | | | | | | | |
| Coker | 97-66 | 1335 | 957 | 976 | 340 | 1208 | 4816 |
| - | Karl | 1057 | 252 | 932 | 1031 | 1386 | 4658 |
| - | OK 89G903 | 1612 | 319 | 983 | 784 | 921 | 4619 |
| - | OK 89G905 | 1463 | 502 | 803 | 634 | 1107 | 4509 |
| - | TAM 200 | 1132 | 529 | 879 | 574 | 1393 | 4507 |
| - | Arkan | 1414 | 310 | 854 | 664 | 1216 | 4458 |
| - | OK 89G906 | 1334 | 341 | 737 | 837 | 1194 | 4443 |
| Agripro | Stallion | 1401 | 247 | 681 | 800 | 1293 | 4422 |
| - | OK 89G902 | 1104 | 688 | 757 | 675 | 1176 | 4400 |
| - | OK 89G901 | 1079 | 528 | 694 | 662 | 1334 | 4297 |
| Quantum | 554 | 1430 | 227 | 815 | 714 | 1010 | 4196 |
| Agripro | Abilene | 850 | 244 | 616 | 1088 | 1388 | 4186 |
| Pioneer | 2180 | 1316 | 455 | 1043 | 530 | 817 | 4161 |
| Agripro | Thunderbird | 680 | 181 | 759 | 988 | 1498 | 4106 |
| Pioneer | 2157 | 1400 | 627 | 732 | 650 | 608 | 4017 |
| - | OK 89G904 | 1283 | 556 | 971 | 413 | 778 | 4001 |
| - | Siouxland | 1176 | 133 | 775 | 886 | 1003 | 3974 |
| - | Chisholm | 1222 | 291 | 749 | 917 | 789 | 3968 |
| AGSECO | 7846 | 1221 | 418 | 730 | 696 | 803 | 3868 |
| - | TAM 107 | 875 | 117 | 738 | 978 | 1074 | 3782 |
| - | Century | 714 | 112 | 509 | 1148 | 1284 | 3767 |
| - | OK 84286 | 886 | 138 | 688 | 787 | 1234 | 3733 |
| - | Triumph 64 | 1241 | 169 | 764 | 807 | 522 | 3503 |
| - | Cimarron | 664 | 122 | 705 | 870 | 1133 | 3494 |
| - | TAM W-101 | 726 | 230 | 910 | 495 | 763 | 3124 |
| Agripro | Mesa | 297 | 114 | 987 | 576 | 1081 | 3055 |
| <u>RYE</u> | | | | | | | |
| - | Bonel | 1874 | 785 | 1457 | 877 | 2002 | 6995 |
| - | NF 14 | 1703 | 903 | 1562 | 736 | 1830 | 6734 |
| - | NF 125 | 1542 | 856 | 1619 | 839 | 1853 | 6709 |
| - | NF 109 | 1487 | 899 | 1560 | 684 | 1865 | 6495 |
| - | NF 222 | 1013 | 280 | 772 | 836 | 1015 | 3916 |
| Average | | 1173 | 398 | 894 | 761 | 1163 | 4389 |
| LSD (0.05) | | 345 | 208 | 168 | 144 | 256 | 583 |
| CV (%) | | 21 | 37 | 13 | 13 | 16 | 9 |

Planted: September 1, 1989
 Fertilizer: 75-0-0 August 31, 1989
 60-0-0 October 20, 1989
 60-0-0 March 13, 1990

PERKINS small grain variety test, forage
production (lbs/acre) 1989-90 season.
Teller loam.

| BRAND | ENTRY | Harvest Dates | | | Total |
|------------------|-------------|---------------|------|------|-------|
| | | 1-5 | 3-19 | 5-11 | |
| <u>WHEAT</u> | | | | | |
| Quantum | 554 | 0 | 1825 | 2393 | 4218 |
| Agripro | Abilene | 0 | 930 | 3275 | 4206 |
| - | Siouxland | 0 | 1318 | 2807 | 4125 |
| - | TAM 200 | 0 | 1324 | 2756 | 4080 |
| Pioneer | 2180 | 0 | 2188 | 1861 | 4049 |
| - | OK 89G906 | 0 | 1188 | 2806 | 3994 |
| - | Triumph 64 | 0 | 951 | 3020 | 3971 |
| Pioneer | 2157 | 0 | 1618 | 2323 | 3941 |
| Agripro | Thunderbird | 0 | 1005 | 2921 | 3926 |
| - | Karl | 0 | 755 | 3071 | 3827 |
| - | OK 89G905 | 0 | 1102 | 2719 | 3820 |
| - | OK 89G902 | 0 | 1260 | 2538 | 3798 |
| Agripro | Mesa | 0 | 1235 | 2558 | 3793 |
| Coker | 97-66 | 0 | 1829 | 1953 | 3782 |
| - | OK 89G903 | 0 | 1577 | 2187 | 3764 |
| - | Cimarron | 0 | 772 | 2852 | 3625 |
| - | OK 84286 | 0 | 969 | 2642 | 3611 |
| Agripro | Stallion | 0 | 1143 | 2460 | 3603 |
| - | Century | 0 | 691 | 2899 | 3590 |
| - | OK 89G904 | 0 | 1407 | 2089 | 3496 |
| AGSECO | 7846 | 0 | 975 | 2519 | 3494 |
| - | Arkan | 0 | 1283 | 2187 | 3470 |
| - | OK 89G901 | 0 | 1179 | 2247 | 3426 |
| - | Chisholm | 0 | 1124 | 2117 | 3241 |
| - | TAM W-101 | 0 | 1342 | 1891 | 3233 |
| - | TAM 107 | 0 | 619 | 2307 | 2927 |
| <u>RYE</u> | | | | | |
| - | NF 125 | 1110 | 1416 | 3142 | 5668 |
| - | NF 109 | 1183 | 1450 | 2848 | 5481 |
| - | NF 14 | 1128 | 1352 | 2931 | 5411 |
| - | Bonel | 1248 | 1261 | 2885 | 5394 |
| - | NF 222 | 0 | 1371 | 2786 | 4158 |
| <u>TRITICALE</u> | | | | | |
| - | Newcale | 0 | 1202 | 3032 | 4234 |
| Average | | 1167 | 1240 | 2594 | 3980 |
| LSD (0.05) | | NS | 374 | 483 | 612 |
| CV (%) | | 13 | 21 | 13 | 11 |

Planted: August 31, 1989
Fertilizer: 60-0-0 August 30, 1989
60-0-0 March 22, 1990



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