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OAT FORAGE YIELDS AT OVERTON FOR 1994-95 AND THREE-YEAR MEANS

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Background. Oats are an important winter forage crop in south central Texas. Oats can produce high yields of good quality forage. Oats are susceptible to winterkill and only the most winterhardy varieties should be planted in northeast Texas. There are significant differences between varieties for winter hardiness and forage distribution during a growing season. Some varieties produce much of their forage yield in the fall, while others produce a more balanced yield throughout the growing season.

Research Findings. An oat forage variety experiment is conducted annually at Overton. Many available commercial and experimental oat varieties were evaluated during the past 3 years. Fertilizer application rates and dates for 1994-95 are noted in Table 1. All tests were planted into a prepared seedbed. Planting dates were early September normally, however, in 1994 the planting date was 9 September. Seeding rate was 110 lbs/ac and plot size was 4 x 12 ft. Seed was drilled into the seedbed approximately 1 inch deep. Entire plots were harvested on four dates with a Hege plot harvester at a cutting height of 2 inches. There were 4 replications. Oat forage was approximately 10 inches tall during the first harvest on 23 November. Soil moisture was adequate to obtain good stands. Soil moisture was limited in late September, and thereafter remained good throughout the growing season. The lowest temperature recorded during the growing season was 25 F, and no winterkilling or freeze damage was observed.

In the 23 November harvest, yields were low and quite uniform across all entries. In the 24 January harvest, as expected, yields were low. In the 29 March harvest, yields were very high for most varieties. Top yielding varieties were 'Harrison' and 'Bob'. In the last harvest on 25 April, yields remained high, with the highest yields being produced by experimentals TX92M1048 and TX92M1044. For the total seasonal yield, Harrison and Bob had the highest yield, indicating that the 3rd harvest was most important in the total season contribution. Three year averages are presented for those lines tested for the past three years. Crown rust ratings are presented (Table 1). Crown rust can be important in Texas and very susceptible varieties should not be grown for either forage or grain production. Winter freeze damage on oats can be a serious problem on oats in Texas. Varieties such as 'TAMO 386' should not be planted in North Texas due to the high probability of winter freeze damage. Differences in forage yields of less than the LSD (note under each column) may be due to experimental error and should not be considered significant.

Application. The data from these trials should be useful in selecting varieties for your farm. Depending on variety availability, compare forage yields to determine which variety you want to plant.

Table 1. Oat forage variety test at Overton, TX 1994-95.

Variety	HAR 1 11-23	HAR 2 1-24	HAR 3 3-29	HAR 4 4-25	Total DMY	3 Year Average	Crown Rust 0-9
----- pounds of dry matter per acre -----							
Harrison	409	498	2800	1681	5388	-- ^a	2
Bob	660	523	2798	1386	5367	6549	5
FL874-51-G3*	616	578	2314	1760	5268	--	0
TX92M1048*	597	469	1795	2126	4987	--	4
FL874-E55*	496	381	2351	1632	4860	--	1
811	503	530	2463	1337	4833	--	6
TX92M1596*	787	526	2098	1414	4825	--	3
TX92M1090*	525	418	1899	1849	4691	--	4
TAMO 386ERB*	613	485	2076	1509	4683	6550	0
TX92M1044*	627	428	1443	2176	4674	--	5
H-833	428	420	1785	1896	4529	--	2
Buckshot H.G.	488	325	2122	1515	4450	6615	6
7630	487	515	2346	1059	4409	--	1
FLA 502	496	445	1341	1886	4168	6483	1
TAMO 386R*	577	499	2094	986	4156	--	6
AR FOB 30*							
TAMO 386	408	396	1409	1764	3977	--	4
Ozark	303	473	1648	1526	3950	5378	6
TAMO 393	574	445	986	1696	3701	--	0
Mean	533	464	1987	1622	4606		3
LSD (0.10)	185	83	535	360	715		-

Planted September 9, 1994. *Fertilization:* Preplant 50 lbs N, 100 lb P₂O₅ and 100 lbs of K₂O/ac. Topdressed with 40 lbs N/ac on November 3, 50 lbs N/ac on January 19, and 60 lbs N/ac on March 17 applied as ammonium nitrate. *Herbicide:* Glean was applied postemergence at the two leaf stage at a rate of 0.3 oz/ac on October 4, 1994. *Insecticide:* Lorsban 4E was applied at a rate of 0.5 pt/ac on October 4, 1994 to control greenbugs.

*Experimental line, seed is not available.

^aNot tested in all years.