

# Oat, Rye, and Wheat Forage Variety Tests At Overton in 1985-86

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## Summary

This report presents forage data for the 1985 to 86 winter growing season for oats, rye, and wheat at Overton, Texas. Highly favorable growing conditions, with no winterkill or freeze damage resulted in good forage yields. Oats produced higher forage yields than wheat or rye. The mean yields across all varieties for oats, wheat, and rye was 9,700, 6,700, and 5,510 lbs DM/A, respectively.

## Introduction

These experiments were conducted to determine the forage yielding potential of small grain varieties and experimental lines in East Texas. Also, we wanted to determine the seasonal distribution of forage for the small grain

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**KEYWORDS:** *Triticum aestivum*/*Avena sativa*/*Secale cereale*/  
small grain forage/yield dry matter.

varieties and to test their winterhardiness and disease resistance.

### Procedure

Available commercial and experimental wheat, oat, and rye varieties were planted in three separate experiments at Overton during early September 1985. In the wheat test there were 26 entries which included 23 wheats and three triticale varieties. Among the wheat lines there were 3 hybrids, 6 hard red winter wheats, and 14 soft red winter wheats. There were 14 rye genotypes in the rye tests, of which several were experimentals being submitted by the Noble Foundation. There were 14 genotypes included in the oat test.

All tests were planted in a prepared seedbed which had been fertilized with 60-60-80 lbs/A of N, P<sub>2</sub>O<sub>5</sub> and K<sub>2</sub>O, respectively. Planting dates were September 9 for rye, and September 12 for oats and wheat. Seeding rate was 120 lbs/A and seed were planted with a drill into six row plots 12 ft in length with 8-inch row spacing. Each experiment was replicated four times. All experiments were top-dressed with urea at a rate (actual N) of 100 and 50 lbs/A on October 16, 1985 and January 22, 1986.

Forage plots were harvested with a Hege forage plot harvester, which has a sickle bar and were cut at 2-inches height. Percent dry matter (oven-dried forage) was determined in order to obtain total dry matter. A 10 percent least significant difference was computed for each harvest on each test. This value can be used to make comparisons between varieties. Differences greater than this value are real 9 times out of 10 and may be considered significant.

### Results and Discussion

Oat forage yields are presented in Table 1. Above normal temperatures during December, January, and February resulted in good forage production during this period. A uniform distribution of forage resulted which is unusual for oats. No winterkilling occurred and diseases were not observed during 1985 to 1986 in this test.

Rye forage yields are presented in Table 2. Yields were about average for 1985 to 1986. Dry weather in December through February limited rye yields during that period. The warm winter probably resulted in the rye plants changing to a reproductive growth stage quite early (producing a seed head), and thus, late spring forage yields were reduced.

Wheat forage yields are presented in Table 3. Yields were about normal or above normal for wheat in East Texas. Good forage distribution was obtained. Lower yields on March 20 were due to moisture stress prior to that harvest. No winterkilling or significant diseases were observed in this study.

Results of these studies should be used with caution. More than one year's data is desirable when variety recommendations are made because of interaction with weather conditions. Since the growing season of 1985 to 86 was unusually warm, this is especially the situation.

**TABLE 1. OAT VARIETY FORAGE TEST AT OVERTON, TEXAS, 1985 TO 1986**

Variety	Harvest Dates				Total Yield
	Nov. 19	Feb. 28	Mar. 20	Apr. 28	
-----pounds oven-dried forage per acre-----					
Bob	2,236	2,684	1,742	4,242	10,904
Four-twenty-two	2,328	2,526	1,617	4,300	10,771
Walken	2,704	2,824	2,293	2,939	10,760
Coker 227	2,346	3,227	1,955	2,576	10,104
Harpool 833	2,477	2,263	2,133	3,187	10,060
Tx-82M 5061	2,386	2,543	1,706	3,275	9,910
Tx-81C 676	2,424	2,192	1,297	3,929	9,842
Mesquite	1,832	2,719	2,080	3,131	9,762
Big Mac	1,942	2,034	2,186	3,395	9,557
Tx-81C 3643	2,034	2,490	1,298	3,721	9,543
Tx-82M 4350	2,072	2,947	1,226	2,746	8,991
Tx-83Ab 2923	2,481	1,771	1,386	3,145	8,783
Tx-81C 606	2,037	1,982	1,404	3,342	8,765
Tx-82C 6023	2,034	1,771	2,186	2,061	8,052
Mean	2,238	2,427	1,751	3,285	9,701
LSD (%)	640 <sup>1</sup>	878 <sup>1</sup>	780 <sup>1</sup>	1,079 <sup>1</sup>	1,959
CV (%)	23	28	35	26	16

<sup>1</sup>Differences in yield between varieties within a harvest date of less than the LSD value, are due to chance.

**TABLE 2. RYE FORAGE VARIETY TEST AT OVERTON, TEXAS, 1985-1986**

Variety	Harvest Dates				Total Yield
	Nov. 21	Feb. 28	Mar. 20	Apr. 11	
-----pounds oven-dried forage per acre-----					
Fla. Exp. 201					
ES-79-1	1,586	3,440	355	852	6,233
Gurley GI-87	1,729	2,309	887	791	5,716
Noble Foundation					
14	1,729	2,079	1,048	852	5,708
Fla. Syn-T	1,807	2,584	419	699	5,509
Maton	1,651	1,545	1,435	821	5,452
Gurley GI-87X	1,703	2,064	742	897	5,406
Noble Foundation	1,495	2,049	935	882	5,361
Noble Foundation					
142	1,599	2,140	871	714	5,324
Bonel	1,547	1,926	951	882	5,306
Elbon	1,378	2,064	1,000	669	5,111
Noble Foundation					
125	1,586	1,957	774	700	5,017
Fla. 401	1,521	1,085	435	1,064	4,105
Wintergrazer 70B	988	932	1,080	1,080	4,080
X-73-19	1,222	963	709	912	3,806
Mean	1,539	1,938	831	844	5,152
LSD (10%)	331 <sup>1</sup>	708 <sup>1</sup>	417 <sup>1</sup>	NS <sup>2</sup>	1,049 <sup>1</sup>
CV	18	30	42	35	17

<sup>1</sup>Differences in yield between varieties within a harvest date, of less than the LSD value are due to chance.

<sup>2</sup>No significant differences.

**TABLE 3. WHEAT FORGE VARIETY TEST AT OVERTON, TEXAS, 1985 TO 1986**

Variety	Harvest Date				Total Yield
	Nov. 22	Feb. 28	Mar. 20	Apr. 24	
	----- pounds oven-dried forage per acre <sup>1</sup> -----				
Exp. Tx-78-7303	1,352	3,060	505	3,137	8,054
Beagle Triticale	1,404	1,438	312	4,709	7,863
Exp. Tx-80-38	1,404	3,014	457	2,913	7,789
TAM-W-107	1,335	1,827	1,395	2,792	7,348
Bradford	1,525	1,964	818	2,977	7,284
Coker 68-15	1,525	1,986	1,010	2,689	7,211
Souixland	1,491	1,964	1,371	2,356	7,182
McNair 1003	1,352	2,809	674	2,157	6,992
Exp. Tx-80-22	1,317	2,581	553	2,521	6,972
Caldwell	1,369	1,256	818	3,413	6,855
Noble Foun. 126	1,352	2,238	1,106	2,103	6,799
Nelson	1,300	3,151	794	1,506	6,751
Fillmore	1,265	1,895	1,083	2,181	6,724
Rosen	1,265	2,238	481	2,695	6,678
HW 3015	1,335	2,626	914	1,767	6,642
Councill Triticale	1,508	1,438	1,131	2,545	6,622
Fla. 201 Triticale	1,300	685	770	3,745	6,500
Auburn	1,335	1,073	890	3,163	6,460
Adder	1,213	1,804	962	2,460	6,439
HW 3022	1,387	1,827	890	2,182	6,285
Exp. Tx 82-185	1,404	2,398	818	1,513	6,132
HW 3021	1,265	2,215	673	1,959	6,113
Compton	1,560	1,781	1,010	1,714	6,065
Noble Foun. 67	1,352	1,530	1,106	2,066	6,054
Pioneer 2157	1,352	1,644	1,106	1,556	5,658
TAM-W-108	1,335	890	1,178	1,998	5,401
Mean	1,369	1,974	878	2,504	6,726
LSD (10% level)	NS <sup>2</sup>	NS	NS	1,031 <sup>3</sup>	1,442 <sup>3</sup>
CV	11	42	42	29	15

<sup>1</sup>Yield data are from three replications as one replication was discarded due to lack of uniformity.

<sup>2</sup>No significant differences between varieties.

<sup>3</sup>Differences in yield between varieties within a harvest date, of less than the LSD value are due to chance.