

## OAT FORAGE YIELDS AT OVERTON FOR 2000-2001 AND THREE-YEAR MEANS

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**Background.** The oat forage crop is an important winter annual in east and south Texas. Oats have advantages over other small grains in that they will produce more forage in warm weather than wheat and rye. Oats will normally produce a greater total season forage yield than wheat or rye. Oats will also grow-off rapidly after seeding in a prepared seedbed and produce forage early in the fall with moisture and warm temperatures. A disadvantage of oats is that they often are susceptible to winter kill during periods of extreme cold. Oats are of high forage quality and cattle and deer often prefer oats to other small grains species. There are significant differences between varieties and over years. Some varieties produce more forage in the fall while others produce higher yields in the winter or spring.

**Research Findings.** An oat forage variety test is conducted annually at TAMU Agricultural Research and Extension Center at Overton. Commercial and experimental oat varieties were evaluated during the past three years. Fertilizer application rates and dates are noted in Table 1. Planting dates were early September normally, however, due to a dry September in 2001 the planting date was 4 October. Seed were drilled into a prepared seedbed at a 1 inch depth at 110 lb/ac. Plot size was 4 x 12 ft with four replications. The plots were harvested with a Hege plot harvester at a cutting height of 2 inches on 20 February, 9 March, 30 March, and 1 May. A dry April in 2001 resulted in oats going to seed about 3 weeks earlier than normal and reduced forage yields in the spring. In the 20 February harvest, experimental lines TXAB1581, and TX96M1394 produced the higher forage yields. In the 9 March harvest, 'TAMO 397' produced the highest yield, however, it was not significantly higher than most other entries. In the 3<sup>rd</sup> harvest on 30 March, production was increasing with warmer weather. Experimental lines produced the higher yields, while 'Dallas' and 'Heavy Grazer 76-30' were the higher yielding commercial varieties. In the last harvest on 1 May, best yielding commercial entry was produced by Dallas. Highest yielding commercial entries for the entire growing season was Dallas and TAMO 397. Yields of varieties tested over the last three years indicated that Dallas and TAMO 397 produced highest mean yield, however, Heavy Grazer 76-30 was similar. We did experience some winter freeze damage in 2000-01. Dallas was very winter hardy, while TAMO 397, 'Bob', Heavy Grazer 76-30, and 'Chapman' had a greater degree of freeze damage.

**Application.** Data presented from these trials should be useful in selecting oat varieties for your ranch. Depending on varieties available, compare forage yields to determine which variety you want to plant. Oats will produce good forage yields during the early fall, early spring, and late spring but during cold weather, little forage will be produced.

Table 1. Oat forage variety test at Overton, Texas for 2000-2001 and 3-year mean yields.

Variety	Harvest 1 Feb 20	Harvest 2 Mar 9	Harvest 3 Mar 30	Harvest 4 May 1	Total DMY	3-Year Mean Yields	Freeze Damage Rating
	-----pounds of dry matter per acre-----						0-9
TX96M1091*	834	783	1197	1212	4027	- <sup>a</sup>	2+
TX96M1390*	726	628	1228	1347	3929	4507	4
TX96M1560*	195	831	1590	1232	3848	-	3
TX96M1384*	644	813	1485	878	3820	-	3
TX96M1394*	919	851	1110	935	3815	-	4
LA9344E-10*	431	815	1300	1212	3758	-	3
TX95Ab1213*	527	879	1500	825	3730	-	3
Dallas	226	875	1349	1278	3728	5047	1
Tamo 397	877	939	1101	550	3468	4963	2
NF-188*	556	809	1286	773	3423	4975	2
Bob	513	785	1035	984	3316	4443	3
LA93399E-45*	568	874	1151	695	3288	-	2
Horizon 314	451	887	1074	844	3257	-	3
TXAb1581*	978	515	781	972	3246	-	1
FLX 474-1-B2-8-W*	792	883	1047	485	3207	-	3
Heavy Grazer 76-30	394	885	1450	463	3192	4723	3
Chapman	456	840	1064	606	2966	4350	2
LA90113AFL2-1-19-3-1*	238	817	1184	611	2851	-	3
Grand Mean	574	817	1219	883	3493	-	-
LSD	320	257	389	510	784	-	-
CV	47	27	27	49	19	-	-

Planted October 4, 2000. Fertilization: Preplant 400 lb 10-26-26/ac. Topdressed with 40 lb N/ac on November 22, 2000, 40 lb N/ac on January 29, 2001, 40 lb N/ac on March 5, 2001, and 40 lb N/ac on April 4, 2001. Applied Glean at 1/3 oz ai on November 15, 2000 for weed control.

\*Experimental line, seed presently not available.

+Freeze damage ratings were on a 0-9 scale where 0 = no damage and 9 = dead plants.

<sup>a</sup>Line not tested over last 3 years.