OAT FORAGE YIELDS AT OVERTON FOR 1998-99 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 winterkill during periods of extreme cold. Oats are of high forage quality and cattle and deer often prefer oats over 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 3 years. Fertilizer application rates and dates are noted in Table 1. Planting dates were early September normally, however, in 1998 the planting date was 18 September. Seed were drilled into a prepared seedbed at an 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 9 December, 8 February, 22 March, and 16 April. In the 9 December harvest, experimental lines FLX502-1-B-Q, TX95C3147, TX96M1390, and TX97C1168 produced the higher forage yields. In the 8 February harvest, 'TAMO 386', 'Harrison' and 'Bob' were the higher yielding commercial entries, although all yields were quite low during this "winter" period. Yields were nearly 4 times higher on the 22 March harvest. Entries producing over 2600 lb dry matter were TX96M1384, 'Dallas', NF 188, FL920HR26,76, and FL920HR3134, however, they were not significantly different than several other entries. In the last harvest, best yielding entries were TAMO 386, TX93Ab715, and 'TAMO 397'. Highest yielding commercial entries for the entire growing season were TAMO 386, Dallas, and TAMO 397. Yields of varieties tested over the last 3 years indicated that Dallas and TAMO 397 were similar, however, TAMO 386 was not tested all three years. We did experience some winter freeze damage in 1998-99. As expected both TAMO 397 and TAMO 386 had significant freeze injury. Both of these varieties are susceptible to freeze injury in North Texas.

Application. Data presented from these trials should be useful in selecting oat varieties for

your ranch. Depending on variety availability, 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 1998-99 and 3-year average.

Variety	Harvest 1 Dec 9	Harvest 2 Feb 8	Harvest 3 Mar 22	Harvest 4 Apr 16	Total DMY	Three Year Average	Freeze Damage 0-9
	----------pounds of dry matter/acre----------						
TAMO 386	600	626	2455	2336	6016	–[a]	3
FLX502-1-B-Q	1222	423	2131	2155	5930	–	2
TX96M1384*	726	430	2691	2022	5868	–	2
Heavy Grazer	947	419	2347	2103	5816	–	0
Dallas	867	512	2622	1706	5707	5002	1
TX93Ab715*	939	315	1886	2547	5686	–	3
TX95C3147*	1210	334	1851	2195	5590	–	3
NF 188*	695	550	2624	1632	5501	5151	0
TX96M1609*	761	421	2023	2286	5491	–	2
TAMO 397	817	366	1796	2461	5439	4940	4
TX83Ab2923*	987	401	1968	2071	5427	–	1
Harrison	785	657	2229	1625	5296	–	0
FL920HR26,76	558	629	2749	1298	5235	–	1
FL920HR3134	109	607	2696	1720	5130	–	1
811	644	506	2355	1603	5108	–	1
Bob	721	643	2375	1369	5107	4314	1
Chapman	692	493	2505	1239	4929	–	1
Ozark	588	538	1944	1796	4865	4503	0
TX92M1028*	502	520	2081	1716	4818	–	1
TX97C1168*	1127	80	1171	1988	4365	–	7
TX96M1390*	1168	28	989	1968	4154	–	2
Grand Mean	793	452	2166	1897	5308	–	0
CV	33	33	19	24	12	–	0
LSD (0.10)	240	135	376	418	583	–	0

Planted September 18, 1998. Fertilization: Preplant 500 lb 10-20-20/ac. Topdressed with 50 lb N/ac on November 2, 40 lb N/ac on December 18, 40 lb N/ac on January 15, 500 lb 13-13-13/ac on February 25, and 25 lb N/ac on March 24, 1999.

Freeze damage recorded on a 0-9 scale where 0 = no damage and 9 = dead plants.

*Experimental line, seed not available to growers.

[a]Entry not tested over the last 3 years.