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OAT FORAGE YIELDS AT OVERTON FOR 2004-2005 AND TWO-YEAR MEANS

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Background. The oat forage crop is an important winter annual in east and south Texas. Oats have advantage over other small grains in that they will produce more forage in warm weather than wheat and 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 the TAMU Center at Overton. Fertilizer application rates and dates are noted in Table 1. Planting date in 2004 was on 22 Sept. Seed were drilled into a prepared seedbed at a 1 inch depth at 110 lb/ac. Seed were planted in seven rows spaced 6 inches apart. Plot size was 4 x 12 with four replications. The plots were harvested with a Swift plot harvester at a cutting height of 2 inches on 8 Nov., 11 Jan., 28 Feb., 24 Mar., and 15 Apr. Moisture and environmental conditions were favorable in the fall and winter for good forage production. Dry growing conditions in March, April, and May resulted in early heading and low forage production in April and no production in May. Later maturing varieties were limited in reaching their full genetic potential during this period. In the first harvest on 8 Nov., good yields were measured for all entries; however, higher producing varieties were Horizon 474, Horizon 321, Nora, and Horizon 314. In the second harvest on 11 Jan., yields were only average due to the cold growing conditions. Little differences are noted for forage yields in the second harvest. In the 28 Feb. harvest, Horizon 314 produced the highest yield, but little significant differences are apparent between lines. In the 4th harvest on 24 Mar., Heavy Grazer 76-30 produced the highest yield. It was closely followed by Horizon 314 and several other entries. In the last harvest on 15 Apr., all yields were very good; however, much of dry matter was composed of stems and seed heads. This was the result of hot, dry growing conditions which resulted in the loss of any May forage production. For the total season yields, good forage production was evident with highest yielding varieties being Horizon 314, Horizon 321, and Heavy Grazer 76-30. Several experimental oat lines demonstrated high forage yield potential and may be released in the future. Forage production over several years is the best indication of high forage production of lines tested over that period. In these trials, higher yielding varieties over 2 years were Horizon 314 and Heavy Grazer 76-30. We did

experience some winter freeze damage in 2005. Horizon 314 was more winter hardy than most of the other entries which may have caused this variety to be higher yielding than most other entries in the trial.

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.

Table 1. Oat forage variety test at Overton, Texas for 2004-2005.

Variety	Harvest	Harvest	Harvest	Harvest	Harvest	Total DMY	% Freeze Rating	2 Yr. Mean
	1 Nov. 8	2 Jan. 11	3 Feb. 28	4 Mar. 24	5 Apr. 15			
-----pounds of dry matter per acre-----								
TX02U 7473*	1582	1170	997	918	1521	6188	20 ^a	--**
Horizon 314	1284	980	1127	1253	1515	6159	10	6519
Horizon 321	1496	987	853	967	1846	6149	17	--
AR0258-7*	1348	806	805	1200	1926	6085	13	6967
TX02D039*	1355	891	1068	1087	1672	6073	15	--
LA9810SBS-58*	1097	1126	968	1094	1749	6034	17	5725
LA976GBS-22-B-S2*	1173	1129	836	1022	1807	5967	24	6230
TX02D113*	1596	1030	895	1007	1427	5955	20	--
Heavy Grazer 76-30	1194	838	805	1401	1657	5895	20	6509
TX02D054*	1350	1019	806	830	1782	5787	17	--
TX96D093*	1580	672	707	1187	1629	5775	12	5815
TX02U 7344*	1222	935	884	1060	1644	5745	17	6186
Horizon 474	1565	731	812	1064	1572	5744	15	5914
TX02D099*	1081	737	973	1177	1729	5697	10	--
TX02U 7605*	1403	868	1013	1001	1390	5675	22	--
TX02D043*	1317	1003	991	865	1428	5604	20	--
LA9825SBSB-59-C*	1245	703	998	1058	1565	5569	15	--
TX02D086*	1376	827	957	1147	1254	5561	17	--
TX02U 7682*	1382	964	989	801	1424	5560	25	--
TX02D023*	1299	853	805	903	1688	5548	20	--
Nora	1391	814	919	900	1452	5476	20	--
TX02D044*	1250	799	1127	926	1356	5458	15	--
Dos	1136	712	746	1192	1583	5369	13	--
LA966BSB119-1*	1296	917	699	782	1531	5225	20	5195
Grand Mean	1316	882	896	1005	1537	5636	17.4	--
LSD	265	223	154	163	247	704	--	--
CV	22	28	19	18	18	14	--	--

Planted on September 22, 2004. Fertilization: Preplant 75 lb N, 0 lb P₂O₅, and 100 lb K₂O/ac, respectively. Topdressed with 40 lb N/ac on Jan. 12, 20 lb N/ac on Mar. 4, and 50 lb N/ac on Mar. 25, and 60 lb K₂O/ac on March 25, 2005. Herbicide applied postemergence at 2 leaf stage; Glean at recommended rate.

*Experimental lines, seed is presently not available.

**Entry not tested over last 2 years.

^aFreeze rating is a mean of 4 replications for each entry.