

PUBLICATIONS

1993

FIELD DAY REPORT - 1993

Texas A&M University Agricultural Research and Extension Center at Overton

**Texas Agricultural Experiment Station
Texas Agricultural Extension Service**

Overton, Texas

May 28, 1993

Research Center Technical Report 93-1

All Programs and information of the Texas Agricultural Experiment Station and Texas Agricultural Extension Service are available to everyone without regard to race, color, religion, sex, age, or national origin.

Mention of trademark of a proprietary product does not constitute a guarantee or a warranty of the product by the Texas Agricultural Experiment Station or Texas Agricultural Extension Service and does not imply its approval to the exclusion of other products that also may be suitable.

OAT GRAIN VARIETY TESTS AT MOUNT PLEASANT FOR 1991-92 AND 2 YEAR MEAN YIELDS

Jim Crowder, Steve Ward, L. R. Nelson, and Xiaobing Fang

Background. Oat grain variety trials were planted in northeast Texas at Mount Pleasant. These trials were planted to compare grain yield potential, local adaptation, winterhardiness, and disease resistance of released varieties of winter oats. Oat variety tests were planted on prepared seedbeds. The soil near the Mount Pleasant site was a poorly drained clay on the Carl Snyder farm. Seeding rate was 90 lbs/ac. A plot was 7 rows with 6 inch row spacing, 10 ft in length. The test was planted on October 18 and harvested on June 5, 1992. Fertility application was 28 lbs of N, 72 lbs P₂O₅/ac, applied preplant. The oats were top-dressed with two applications of 45 lbs/ac each, of actual N as ammonium nitrate on January 17 and March 10, 1992.

Research Findings. The 1991-92 growing season was extremely wet in the fall and winter while these conditions favored disease buildup on wheat, oats were not affected. Grain yields were good at Mount Pleasant (Table 1). The highest yielding varieties at Mount Pleasant were Ozark, TAM-O-386, H-833, Bob, and Blizzard. Yields shown for 1990-91 were much lower than 1992. The two year means shown in table 1 indicate the type of oat grain yields that farmers should expect in north Texas. Test weight, average heading date, plant height, and lodging are from the 1992 data. The standard test weight for oats is 32 lbs/bu. In these studies, test weights were slightly below normal. This was due in part to some lodging of the oats, and to early harvest of the crop. Plant height was above average for all of the varieties. The high N application rate may have contributed to the unusually tall plant height. Lodging was quite high on several of the lines. H-833, Nora, TAM-O-386, and Ozark had acceptable lodging ratings. Winterkill on oats is a serious problem most years in north Texas. No winterkill occurred in 1991-92. Crown rust on oats in northeast Texas was not observed in this test in 1992.

Application. These data should be useful in determining which varieties have best potential for grain yield in northeast Texas. Oats are subject to winterkill and only the most winterhardy varieties should be planted. TAM-O-386 should not be planted north of Waco, Texas as winterkill will result most years. Oat grain and forage yields from other variety trials at the Texas A&M University Agricultural Research and Extension Center at Overton are presented elsewhere in this publication.

Table 1. North Texas Oat Grain Test, Mt. Pleasant, Texas for 1991-92.

Variety	1991-92	1990-91	2 Yr Mean	Test Weight lbs	Heading Date	Height inches	Lodging %
H-833	123	88	105	27	4-15	43	0
Blizzard	113	86	100	31	4-15	41	10
Nora	112	58	85	30	4-11	48	0
TAM-0-386	125	41	83	31	4-12	47	0
Bob	122	42	82	30	4-11	46	30
Citation	112	46	79	27	4-09	45	90
Ozark	138	--	--	26	4-13	49	0
Big Mac	108	--	--	31	4-13	46	40
NF 188	97	--	--	30	4-13	57	95
NF 170	88	--	--	26	4-17	54	95
86-13	87	--	--	28	4-10	42	10
Mesquite 2	71	--	--	27	4-10	42	20
Mean	108	60.0	88.9	29	--	47	33
LSD (0.05)	33.3	27.1					
CV	18.2	30.0					

Planting date October 18, 1991. Harvest date June 5, 1992. Fertilizer application rate: Preplant 28 lb of N and 72 lb of P₂O₅/ac. Topdressed with two applications of 45 lb/ac of actual N as ammonium nitrate on January 17 and March 10, 1992. Herbicide applied postemergence at two leaf stage of wheat: 13 oz/ac Glean.