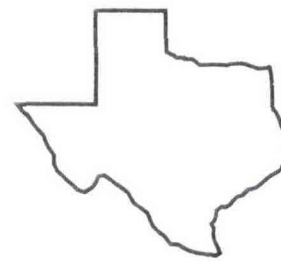
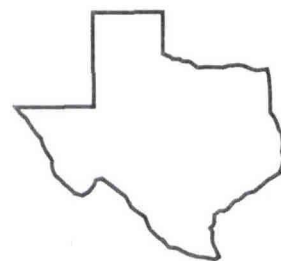
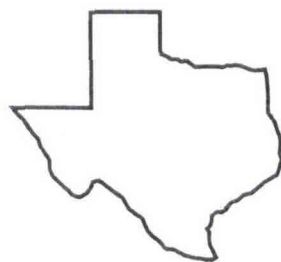
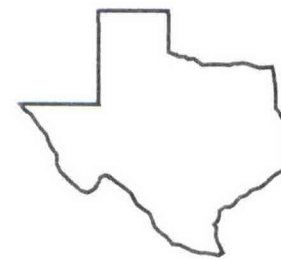


Texas Agricultural Experiment Station
Texas Agricultural Extension Service
The Texas A&M University System



OVERTON FIELD DAY REPORT - 1994



**1994
Research Center
Technical
Report**

No. 94-1

OAT GRAIN VARIETY TESTS AT OVERTON FOR 1992-93 AND TWO-YEAR MEANS

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Background. Oat grain variety trials are planted at the TAMU Agricultural Research and Extension Center at Overton on an annual basis. These trials were planted to determine grain yield potential, adaptability, winter hardiness, and disease resistance of released varieties and experimental winter oat lines.

Research Findings. Oat variety tests were planted on prepared seedbeds. The soil at the Overton site was a poorly drained sandy loam. Seeding rate was 90 lbs/ac. A plot was 7 rows wide, with 6 inch row spacing, 10 ft in length. The test was planted on October 13 and harvested on June 5, 1993. Fertility application was 25 lbs N, 100 lbs P_2O_5 , and 100 lbs K_2O /ac applied preplant. The oat test was top-dressed with 48 lbs N, 18 lbs P_2O_5 , and 36 lbs K_2O on 8 December and topdressed a second time with 75 lbs/ac actual N as ammonium nitrate on 26 February. The 1992-93 growing season was wet in the fall and winter and favored disease buildup, however, oats were not affected. Grain yields were average at Overton in 1993 (Table 1). The highest yielding varieties were Coker 716, BIG MAC, and TAM-386, closely followed by several other varieties. The highest yielding experimental lines were NC 88-1781, TX89D7002, TX89D7213, and TX89D7198, which all produced yields in excess of 108 bu/ac. Two-year mean yields for many of the entries are presented and provide a more reliable yield estimate than one year yield data. Test weights were good in 1993, as several entries had bu test weights of 34 lbs/bu, or above (normal test wt. in oats should equal 32 lbs/bu). Oats are more susceptible to lodging than are wheat, and grain yields of oats often are reduced due to lodging. Plant height was above average for all of the varieties, however, the high N application rate at Overton may have contributed to the tall plant ht. as well as lodging. Winterkilling can be a serious problem in north Texas; however, no winterkilling occurred in 1992-93. Crown rust present at Overton in 1993 developed late in the growing season, and probably reduced grain yields very little. Many oats varieties are very susceptible to crown rust, and only resistant varieties should be planted.

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 winter hardy varieties should be planted. TAM-O-386 should not be planted north of Waco, Texas as winterkilling will result most years. Oat grain and forage yields from other variety trials at Mount Pleasant and Overton are presented elsewhere in this publication.

Table 1. Uniform oat elite grain test for 1992-93 and 2 year means at Overton, Texas.

Variety	Yield bu/ac	2 Yr. mean bu/ac	Test weight lbs/bu	Heading Date	Height (in)	Lodging %	Crown Rust (0-9)
NC 88-1781*	117	--	34	4-14	45	20	1
Coker 716	111	95	34	4-13	49	10	5
TX 89D7002*	110	97	35	4-12	49	25	2
Big Mac	109	100	34	4-19	50	20	1
TX 89D7213*	109	103	32	4-19	46	10	4
TX 89D7198*	108	93	36	4-19	44	80	3
TAM-0-386	106	94	32	4-19	42	0	2
Okay	106	99	35	4-19	49	10	2
Buckshot W.G. 76-3	106	--	35	4-18	53	11	0
NC 88-1818*	104	97	31	4-14	46	0	3
FLA 501	103	82	30	4-13	44	60	3
Cimmaron	100	84	32	4-19	40	80	4
Blizzard	99	89	37	4-19	42	60	1
Ozark	99	82	31	4-19	42	30	1
NC 88-1736*	99	--	32	4-14	45	20	1
TX 90D2457*	99	97	31	4-19	37	30	5
TX 89D7073*	96	87	32	4-16	53	60	0
TAM-0-386R*	95	88	29	4-20	54	11	0
NC 89-5706*	95	--	33	4-14	41	30	5
Bob	94	86	35	4-14	48	60	5
Coronado	93	85	32	4-19	49	11	2
H-422	93	88	36	4-19	44	50	0
PA 8115-40*	93	--	34	4-26	48	10	6
Coker 227	92	87	35	4-13	49	13	0
Mitchell	91	--	33	4-19	39	10	2
Nora	88	84	31	4-19	53	30	4
H-833	85	85	31	4-19	41	25	2
GA T81-1249*	83	76	35	4-14	39	10	0
TX 83Ab2923*	82	88	33	4-15	52	20	0
FLA 502	79	--	34	4-23	45	11	6
FL 871-63-G15*	79	--	34	4-23	35	0	0
Mesquite II	76	81	33	4-13	38	60	3
FL 874-43-G9*	73	--	29	4-24	40	0	0
Brooks	72	71	30	4-20	41	3	6
AR 820B-111*	72	76	33	4-19	42	10	2
Magnum II	69	--	21	5-7	54	25	5
TX 87B9453*	68	--	26	4-20	40	10	0
TAM-0-386EB*	67	--	29	4-18	43	0	0
TX 88AB1419*	62	--	29	4-27	41	0	0
TX 89B1980*	60	73	30	4-21	40	35	1
TX 82M4964*	58	61	27	4-27	34	0	0
TX 87B9451*	57	67	26	4-26	42	0	0
TX 87M1521*	56	71	27	4-20	37	0	1
TX 87B3086	49	--	29	4-26	41	0	1
Mean	88		32	--	44	22	9
LSD (0.05)	26						
CV	21						

Planting date October 13, 1992. Harvest date June 5, 1993.

Fertilizer application rate: Preplant 25 lb N, 100 lb P₂O₅ and 100 lb of K₂O/A. Topdressed with 48 lb N, 18 lb P₂O₅ and 36 lb of K₂O/ac on December 8, 1992. This test was topdressed again with 75 lb/ac of N as ammonium nitrate on February 26, 1993.

Herbicide applied postemergence at two leaf stage of oats: 0.3 oz/ac Glean. Second application on February 11, 1993 0.25 oz/ac Glean.

Disease ratings were on a scale of 0-9, where 0 = no disease and 9 = dead plants.

*Experimental, seed not available.