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OAT GRAIN VARIETY TESTS AT MT. PLEASANT FOR 1993-94 AND THREE-YEAR MEAN YIELDS

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Background. Oat grain variety trials were planted in northeast Texas at Mt. 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 Mt. 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 28 and harvested on May 24, 1994. Fertility application was 14 lbs of N, 35 lbs P_2O_5 , and 45 lbs K_2O /ac applied preplant. The oats were topdressed with 43 lbs/ac of actual N on February 1, and with 43 lb N/ac on February 28, 1994 as liquid fertilizer.

Research Findings. The 1993-94 growing season was near normal with the exception of a dry April. These conditions did not favored disease buildup on oats. Grain yields were below average for Mt. Pleasant (Table 1). The highest yielding varieties at Mt. Pleasant were Ozark, Okay, and Bob. Three-year mean yields are much higher than the 1993-94 grain yields. Ozark and H-833 produced mean yields over 100 bu/ac. The three year means shown in table 1 indicate the type of oat grain yields that farmers should expect in north Texas. Test weight of a bushel of oats should weigh 32 pounds/bu compared to a 60 lb/bu for wheat. Test weights of all varieties in this test were below the desired 32 pound bushel. Test weight, average heading date, and plant height are from the 1994 data. Plant height was average for all of the varieties. Lodging or winterkill were not observed on oats at Mt. Pleasant in 1993-94. No winterkill occurred in 1992-93. Crown rust on oats in northeast Texas was not observed in this test in 1993.

Application. These data should be useful in determining which varieties have the best potential for grain yield in northeast Texas. Oats are subject to winterkill and only the most winterhardy varieties should be planted. 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. Uniform oat variety grain test for 1993-94 and 3-yr means at Mt. Pleasant, Texas.

Variety	Year 1993-94	3 Yr Mean	Test Weight lbs/bu*	Heading Date*	Height (in.)*
Ozark*	78	115	28	4-14	38
Okay	77	--	26	4-16	41
Bob*	76	89	29	4-11	34
H-833*	62	100	27	4-16	35
TAM-O-386**	58	--	27	4-15	37
Brooks	57	--	25	4-16	35
TAM-O-393**	55	--	26	4-14	38
Buckshot H.G. 7630	50	--	29	4-12	38
Mean	63.9	101	27	--	37
LSD (0.05)	26.1				
CV	23.4				

Plant date: October 28, 1993. Harvest date: May 24, 1994. Fertilizer application rate: Preplant 14 lb N, 35 lb P₂O₅ and 45 lb of K₂O/acre. Topdressed with 43 lb N/acre as liquid fertilizer on February 1, 1994. This test was topdressed again on February 28, 1994 with 43 lb N/acre applied as liquid fertilizer.

*1993-94 data.

**Experimental, seed not available.