PUBLICATIONS
1992

FIELD DAY REPORT - 1992

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

Texas Agricultural Experiment Station
Texas Agricultural Extension Service

Overton, Texas

April 30, 1992

Research Center Technical Report 92-1

SOFT WHEAT GRAIN VARIETY TESTS AT DEKALB AND MOUNT PLEASANT FOR 1990-91

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

Background. Wheat grain yield trials were planted in northeast Texas at Dekalb and Mount Pleasant. These trials were planted to determine yield potential, adaptability, and disease resistance of released varieties as well as experimental soft red winter wheat lines.

Research Findings. Wheat tests were planted on prepared seedbeds. The soil near the Mount Pleasant site was a poorly drained clay on the Carl Snyder farm. The site near Dekalb was a well-drained, sandy loam soil on the Chris Moser farm. The tests were planted in late October and harvested near June 1. Fertility application at Mount Pleasant was 9 lbs of N, 23 lbs P_2O_5, and 30 lbs K_2O/ac applied preplant. The wheat was topdressed with 35 and 45 lbs/ac on Feb. 1 and Mar. 1, respectively. At Dekalb, the test followed corn and had no preplant fertilizer. The Dekalb site was topdressed with 70 lbs N/ac on Mar. 5. The 1990-91 growing season was extremely wet and favored disease buildup of several wet weather diseases. Grain yields were below average (Table 1). The highest yielding varieties at Mt. Pleasant were Saluda, Gore, Terrall-101, Pioneer 2548, and Terrall-877. The higher yielding varieties at Dekalb were Pioneer 2548, Pioneer 2551, Coker 68-15, Saluda, Gore, and FLA 302. The two location means indicate there were little differences between most of these varieties in 1991, because of low yields. There were a few experimental lines which produced higher yields than any of the released varieties. TX-83-4-2 and TX-85-264 appear to have good potential for the northeast Texas area. The heading date, plant ht., % lodging, and disease data are from the Mount Pleasant test only. Lodging was quite severe for many entries. Entries which had a leaf rust rating of 3 or higher are quite susceptible to this disease and yield losses can occur during years when the disease is severe. Septoria glume blotch and other leaf spotting diseases were extremely severe and reduced grain yields by 50% or more. Most of these soft red winter wheat varieties have some resistance, however high levels of resistance to this disease are not available. Hard red winter wheat varieties are quite susceptible to the septoria diseases and do not normally produce high yields in high rainfall areas.

Application. These data should be useful in determining which varieties have best potential for grain yield, and disease resistance in northeast Texas.

Table 1. Uniform Soft Wheat Elite at Mt. Pleasant and Dekalb, Texas for 1990-91

Variety	Yield		2 Location Mean	Test wt	Heading Date	Plant Height	Lodging	Leaf Rust	Septoria Glume Blotch
	Mt. Pleasant	Dekalb							
	----------bu/ac----------			lbs/bu			inches	%	
TX-83-4-2	53.4	45.4	49.4	53	4-17	37	5	0[a]	3[a]
Saluda	51.2	36.3	43.7	47	4-11	28	70	3	6
Gore	50.7	35.4	43.0	51	4-7	31	40	0	4
TX-85-264	49.3	52.6	50.9	47	4-12	35	30	3	4
Terral-101	49.3	40.0	44.6	50	4-10	33	10	0	4
TX-83-70	45.9	39.3	42.6	49	4-13	34	10	0	2
Pioneer 2548	45.7	38.7	42.2	47	4-10	34	50	2	6
Terral-877	45.6	43.1	44.3	51	4-8	32	70	1	5
TX-89D2148	44.8	37.4	41.1	47	4-12	33	70	0	6
TX-85-121-2	44.6	39.4	42.0	53	4-22	36	10	0	3
Caldwell	42.7	45.4	44.0	48	4-13	36	50	4	4
TX-89D2152	42.5	40.3	43.9	50	4-13	36	10	0	4
TX-82-185	42.5	33.9	38.2	47	4-12	29	0	1	5
TX-82-118	42.1	45.7	43.9	52	4-12	33	0	2	4
TX-89D2146	42.1	41.2	41.6	46	4-11	37	25	1	4
TX-89D2143	41.3	36.9	39.1	48	4-13	35	10	2	5
McNair 10-03	41.2	44.9	43.0	46	4-10	37	60	0	5
AR 26415	40.0	38.8	39.4	50	4-11	36	5	1	6
Coker 68-15	39.7	37.1	38.4	51	4-11	36	30	4	4
Magnum	39.2	45.0	42.1	51	4-10	35	50	1	3
TX-83-50	38.9	46.4	42.6	52	4-11	33	5	0[a]	2[a]
Coker 9766	38.7	46.8	42.7	45	4-11	34	50	0	4
TX-82-50-1	37.1	45.0	41.0	49	4-12	31	5	0	4
TX-89D2167	34.7	40.3	37.5	49	--	35	60	1	6
FLA 302	33.1	34.4	33.7	47	4-12	38	10	2	5
TX-88D3581	32.1	47.7	39.9	46	4-14	36	70	2	5
Pioneer 2551	31.6	37.7	34.6	44	4-18	30	10	0	3
TX-76-40-2	31.5	32.1	31.8	44	4-14	28	5	2	4
TX-88D3193	31.4	29.9	30.6	49	4-21	41	60	0	2
Bradford	28.9	44.0	36.4	50	4-10	37	40	1	5
TX-89D9590	28.4	31.4	29.9	42	--	28	0	0	4
TX-89D9613	28.3	39.4	33.8	48	4-12	32	10	1	7
TX-89D9625	24.4	33.2	28.8	46	4-12	25	5	2	5
TX-80-31-3	22.2	32.3	27.2	44	4-12	32	0	1	4
Mean	39.2	--	--	48	--	34	28	1	4
LSD	13.4	--	--						
CV	21.0	--	--						

[a]Disease ratings were on a scale from 0 to 9, where 0 = no disease and 9 was most severely diseased.