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WHEAT GRAIN VARIETY TESTS AT DEKALB FOR 1994-95

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Background. Wheat grain variety trials have been planted near DeKalb, Texas for several years. These trials are planted to determine grain yield potential, adaptation, winter hardiness, and disease resistance of released varieties as well as advanced experimental soft red winter wheat lines in the Red River flood plain in Northeast Texas. A significant acreage of soft red winter wheat is grown in this area and therefore it is an excellent test site. Wheat tests were planted on prepared seedbeds. The soil in 1994-95 was a sandy clay loam. Plots have 7 rows with 6 inch row spacing and are 10 ft in length. The fertilizer applied, planting and harvest dates are on table 1. The test followed a corn crop and no fertilizer was applied preplant. Ammonium nitrate at 60 lb N/ac was top-dressed on 10 March 1995. Weeds were controlled by post-emergence application of Hoelon at 1.5 qt/ac. Weedmaster was applied at 0.5 qt/ac on 3 February to control broadleaf weeds.

Research Findings. The 1994-95 growing season was near normal in precipitation in the fall and winter, however, some late season rains delayed harvest in June. Temperatures were above normal throughout most of the growing season. Grain yields were near normal for northeast Texas (Table 1). The higher yielding varieties were Pioneer 2580, Pioneer 2571, Pioneer 2684, and FLA 302. Highest yielding experimentals were TX91D7001 (62 bu/ac) followed by FL 85238-G585. These one year yields were good for East Texas, but wheat yields have been very good for the past three years. The reason for the good yields was that a fairly dry spring reduced disease buildup of leaf rust and septoria diseases and allowed for a long grain filling period. Test weight of number 1 wheat is 60 lb/bu, however, no entries met this standard. The reason for this may have been several heavy rains in early June after grain had matured. This delayed harvest and whenever this occurs on standing grain, test weights are reduced. Leaf rust disease levels were very low in this test. Neither powdery mildew nor septoria glume blotch was observed in 1995. Lodging was observed on a few lines in this test and was probably due to the late harvest and poor stalk strength of those entries.

Application. These data should be useful in determining which varieties have best potential for grain yield in northeast Texas. Wheat grain yields were near average in 1995 and should be a good indication of yield potential in the DeKalb area. These data are not a good indication of disease resistance since disease severity levels were very low. Other wheat grain yield data from variety tests at Mt. Pleasant and Overton for prior years are presented elsewhere in this field day report.

Table 1. Uniform Soft Winter Wheat Variety Test, DeKalb, TX 1994-1995.

| Variety | Yield bu/ac | Test Weight lbs/bu | Height in | Heading Date | % Lodging | Leaf Rust (0-9) | Stripe Rust (0-9) |
|---------------|----------------|--------------------------|--------------|-----------------|--------------|--------------------|-------------------------|
| TX91D7001 | 61.6 | 54 | 35 | 4-10 | 0 | 0 | 0 |
| Pioneer 2580 | 60.3 | 54 | 34 | 4-21 | 0 | 0 | 0 |
| Pioneer 2571 | 58.4 | 54 | 35 | 4-21 | 0 | 0 | 0 |
| Pioneer 2684 | 57.2 | 57 | 33 | 4-21 | 2 | 0 | 0 |
| FLA 302 | 56.4 | 55 | 37 | 4-21 | 0 | 1 | 0 |
| FL 85238-G585 | 55.1 | 56 | 38 | 4-21 | 0 | 0 | 0 |
| TX87-78-1 | 55.0 | 55 | 36 | -- ^a | 0 | 0 | 0 |
| Pioneer 2548 | 55.0 | 53 | 33 | 4-21 | 0 | 0 | 0 |
| TX91D7012 | 54.4 | 53 | 34 | -- ^a | 0 | 0 | 0 |
| TX91D6999 | 52.9 | 55 | 35 | 4-8 | 5 | 0 | 0 |
| FLA 304 | 51.6 | 52 | 36 | 4-9 | 0 | 0 | 0 |
| TX92D7741 | 51.5 | 53 | 33 | -- ^a | 20 | 0 | 0 |
| TX82-11 | 50.9 | 49 | 35 | -- ^a | 80 | 0 | 0 |
| TX86-6 | 49.6 | 52 | 35 | -- ^a | 0 | 0 | 0 |
| Mallard | 49.1 | 53 | 34 | -- ^a | 0 | 0 | 0 |
| 91D-2308 | 48.8 | 53 | 36 | 4-7 | 0 | 0 | 1 |
| Pioneer 2566 | 48.8 | 51 | 35 | 4-21 | 0 | 0 | 0 |
| Coker 9835 | 48.3 | 52 | 33 | 4-8 | 0 | 0 | 1 |
| Coker 9105 | 46.6 | 51 | 36 | 4-9 | 0 | 0 | 6 |
| TX86-51-2 | 46.0 | 50 | 36 | -- ^a | 0 | 0 | 0 |
| Coker 9904 | 46.0 | 50 | 39 | -- ^a | 0 | 0 | 4 |
| Coker 9543 | 45.7 | 54 | 32 | 4-21 | 0 | 0 | 0 |
| TX89D2142 | 45.0 | 51 | 35 | -- ^a | 0 | 0 | 0 |
| TX91D7013 | 45.0 | 53 | 33 | 4-8 | 5 | 0 | 0 |
| Shiloh | 44.8 | 53 | 34 | -- ^a | 0 | 0 | 0 |
| Coker 762 | 44.2 | 50 | 33 | 4-21 | 20 | 0 | 0 |
| Jackson | 44.1 | 55 | 39 | -- ^a | 2 | 0 | 0 |
| Sawyer | 43.2 | 50 | 38 | -- ^a | 10 | 0 | 0 |
| TX92D7374 | 43.1 | 50 | 40 | -- ^a | 0 | 0 | 0 |
| Coker 9803 | 41.6 | 55 | 36 | 4-21 | 0 | 0 | 0 |
| Coker 68-15 | 40.6 | 51 | 32 | 4-21 | 0 | 0 | 0 |
| Hazen | 40.3 | 54 | 33 | -- ^a | 0 | 0 | 0 |
| Coker 9134 | 40.0 | 54 | 36 | 4-21 | 0 | 0 | 0 |
| Coker 9024 | 39.6 | 51 | 41 | 4-21 | 0 | 0 | 1 |
| TX85-119 | 39.1 | 54 | 36 | -- ^a | 5 | 0 | 0 |
| Wakefield | 38.6 | 53 | 39 | -- ^a | 0 | 0 | 0 |
| FFR 525 | 36.1 | 55 | 39 | -- ^a | 10 | 0 | 0 |
| Abe | 33.6 | 54 | 40 | -- ^a | 5 | 0 | 0 |
| Madison | 32.7 | 53 | 39 | 4-8 | 0 | 0 | 0 |
| Savannah | 32.6 | 52 | 33 | 4-6 | 0 | 0 | 0 |
| Hickory | 30.7 | -- | 39 | 4-8 | 0 | 0 | 1 |
| Cardinal | 27.6 | 53 | 41 | 4-10 | 0 | 0 | 0 |
| Mean | 46.0 | 53 | 36 | -- | 4 | 1 | 1 |
| LSD | 14.0 | -- | -- | -- | -- | -- | -- |
| CV | 18.8 | -- | -- | -- | -- | -- | -- |

Planting date November 2, 1994. Harvest date June 13, 1995. Fertilizer application rate: Topdressed with 52 lb N, 52 lb P₂O₅, and 52 lb of K₂O/ac on February 3, 1995. This test was topdressed again with 60 lb N on March 10, 1995. Herbicide application rate: Hoelon was applied at 1.5 qt per acre and Weedmaster was applied at 0.5 qt per acre on February 3, 1995. Disease ratings were on a scale of 0-9, where 0 = no disease and 9 = dead plants.

^aHeading date was between April 10 and April 21.