PUBLICATIONS
2002

WHEAT GRAIN VARIETY TESTS AT OVERTON, MT. PLEASANT, AND DEKALB FOR 2000-2001 AND THREE-YEAR MEANS

L. R. Nelson, Nathan Melson, and Jim Crowder

Background. Wheat grain variety trials were planted annually at the above locations. These trials were planted to determine grain yield potential, adaptation, winter hardiness, and disease resistance of released varieties of soft red winter wheat. Climatic conditions in east Texas are favorable for several fungal diseases of wheat. Wheat tests were planted in October on prepared seedbeds. Preplant fertilization at Overton consisted of 35 lb N, 90 lb P_2O_5, and 90 lb K_2O/ac. An additional application was applied on 24 January of 20 lb N, 50 lb P_2O_5, and 50 lb K_2O/ac. The experiment was top-dressed with 70 lb N/ac on 21 February. At Mt. Pleasant, preplant fertilization consisted of 17 lb N, 42 lb P_2O_5, and 28 lb K_2O/ac. The test was top-dressed with 75 lb N/ac on 8 February. At DeKalb, no preplant fertilizer was applied. Due to wet soil conditions, the test was not top-dressed until 9 April when 65 lb N/ac was applied. Finesse at a rate of 0.4 oz/ac was applied at Overton and DeKalb, while at Mt. Pleasant 1 qt/ac of Hoelon was applied to control ryegrass.

Research Findings. Good stands were obtained at all locations. No winter kill occurred. Due to a dry April septoria glume blotch was not a serious disease. Leaf rust and powdery mildew were not present. At Overton good yields were apparent (Table 1). Highest yielding variety was 'Shelby' which produced a yield of 73 bu/ac. It was followed by 'Pioneer 2568' and several other varieties. At Mt. Pleasant, very high grain yields were produced by all entries. 'Pioneer P25R57', Pioneer 2568, and 'Pioneer 2571' produced yields in excess of 90 bu/ac. At DeKalb, all yields were low due to low fertility. This test is a good example of how not to fertilize wheat in east Texas. The lack of a preplant fertilizer application caused the wheat to be deficient going into the spring. With very wet growing conditions, we were not able to get into the field until April to apply N. By that time, the grain crop was set or yields were apparently determined. Normal recommendations are to top-dress wheat in February or early March. Therefore, very low yields were made on this test site. In adjacent wheat fields, N was applied by airplane and normal yields of more than 50 bu/ac were harvested. In the average yield over locations, little differences between the top 10 varieties are apparent, with all yielding in excess of 60 bu/ac. For the three-year means (data from Overton), three varieties yielded more than 70 bu/ac. They were 'Coker 9663', and 'Coker 9663', and 'Roane'.

Application. Results from these experiments are useful in determining which varieties have best yield potential for grain yields in east Texas. Varieties with highest grain yield potential should be selected when choosing a variety for your farm; however, disease resistance should also be considered.

Table 1. 2000-2001 Northeast Texas Soft Red Winter Wheat Trials.

Source	Variety	Avg. Test Weight (lb/bu)	Avg. Height (inches)	Location			2001 Avg. Yield (bu/ac)	3 Year Avg. Overton (bu/ac)
				Overton	Mt. Pleasant	DeKalb		
				Grain Yield, bu/ac				
Pioneer	Pioneer P25R57	57.3	33.7	68.2	94.4	28.0	63.5	–
Pioneer	Pioneer 2568	57.7	34.0	71.7	93.4	33.4	66.2	–
Pioneer	Pioneer 2571	58.3	33.7	57.9	92.6	30.5	60.3	72.7
Univ. of Arkansas	Jaypee	60.0	31.3	65.4	87.8	36.5	63.2	73.4
Novartis	Coker 9134	57.0	34.0	69.1	83.6	30.7	61.1	82.4
AgriPro	Natchez	56.7	37.3	68.9	83.6	31.1	61.2	–
Novartis	Coker 9663	58.0	34.7	62.7	83.3	34.8	60.3	82.4
Pioneer	Pioneer 2684	59.7	32.7	68.0	82.6	30.7	60.4	74.6
AgriPro	Shelby	58.7	36.0	73.2	81.7	30.3	61.7	–
Novartis	Coker 9704	58.7	33.0	61.1	80.1	28.2	56.5	–
Novartis	Coker 9803	58.7	32.7	50.1	78.9	25.5	51.5	72.7
Pioneer	Pioneer 2566	58.0	32.7	61.6	73.4	31.1	55.4	71.4
VA Tech	Roane	59.3	30.3	61.4	69.7	43.9	58.3	73.1
AgriPro	Mason	57.0	33.0	63.3	64.7	24.0	50.7	69.9
Novartis	Coker 68-15	59.0	33.7	52.5	82.1	25.3	53.3	56.9