

Wheat and Barley Variety Performance Tests in Tennessee

2006

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General Information

Research and Education Center Tests: The 2006 variety performance tests were conducted on 84 soft, red winter wheat varieties in each of the physiographic regions of the state. Tests were conducted at Highland Rim (Springfield), Knox (Knoxville), Middle TN (Spring Hill), Milan (Milan), and West TN (Jackson) Research and Education Centers.

All varieties were seeded at rates from 25 - 32 seed per square foot (Table 1). Plots were seeded with drills using 7 – 7.5 inch row spacings. The plot size was six, seven or ten rows, 22 to 30 feet in length depending on location equipment. Plots were replicated three times at each location. Seed of all varieties were treated with a fungicide.

County Standard Tests: The County Standard Wheat Test was conducted on 20 soft red winter wheat varieties in ten locations across seven counties in West Tennessee (Dyer, Gibson, Henry, Lake, Moore, Weakley, and Madison). Each variety was evaluated in a large strip-plot at each location, thus each county test was considered as one replication of the test in calculating the overall average yield and in conducting the statistical analysis to determine significant differences. At each location, plots were planted, sprayed, fertilized, and harvested with the equipment used by the cooperating producer in his farming operation. The width and length of strip-plots were different in each county; however, within a location in a county, the strips were trimmed on the ends so that the lengths were the same for each variety, or if the lengths were different then the harvested length was measured for each variety and appropriate harvested area adjustments were made to determine the yield per acre.

Insecticide Seed Treatments: In order to evaluate the effects of seed that had been treated with a systemic insecticide such as Gaucho or Cruiser versus seed that had not been treated, three varieties were evaluated in the research and education center tests in 2006 (Delta King DK9577, FFR 8302, and USG 3350) with and without the systemic insecticide seed treatment.

Growing Season: The growing season began with dry conditions during the fall planting season which delayed germination across much of the region. The winter temperatures were moderately cold with some freezing damage to the plants at some locations but overall the crop weathered the winter in good shape and was rated good to excellent by late spring. The spring season was wet and unseasonably cool during most of March and April. May was unseasonably warm. Heading and maturity of small grains occurred about a week earlier this year than normal. Dry and cool conditions during June facilitated the slightly earlier harvest at most locations. In spite of the dry conditions during planting in the fall, the climatic conditions throughout the growing season were very favorable to wheat. The state average yield on the 190,000 acres harvested for grain set a new state record at 61 bu/a.

Interpretation of Data

The tables on the following pages have been prepared with the entries listed in order of performance, the highest-yielding entry being listed first. **All yields presented have been adjusted to 13.5% moisture.** At the bottom of the tables, **LSD** values stand for **Least Significant Difference**. The mean yields of any two varieties being compared must differ by at least the LSD amount shown to be considered different in yielding ability at the 5% level of probability of significance. For example, given that the LSD for a test is 8.0 bu/a and the mean yield of Variety A was 50 bu/a and the mean yield of Variety B was 55 bu/a, then the two

varieties are not statistically different in yield because the difference of 5 bu/a is less than the minimum of 8 bu/a required for them to be significant. Similarly, if the average yield of Variety C was 63 bu/a then it is significantly higher yielding than both Variety B ($63 - 55 = 8 \text{ bu/a} = \text{LSD of } 8$) and Variety A ($63 - 50 = 13 \text{ bu/a} > \text{LSD of } 8$).

Also, the **coefficient of variation (C.V.)** values are shown at the bottom of each table. This value is a measure of the error variability found within each experiment. It is the percentage that the square root of error mean square is of the overall test mean yield at that location. For example, a C.V. of 10% indicates that the size of the error variation is about 10% of the size of the test mean. Similarly, a C.V. of 30% indicates that the size of the error variation is nearly one-third as large as the test mean. A goal in conducting each yield test is to keep the C.V. as low as possible, preferably below 20%.

----- Wheat -----

Results

Yield and Agronomic Traits: During 2006, 84 wheat varieties were evaluated in five research and education center (REC) tests, and 20 varieties were evaluated in ten county standard tests. The research plots at the Highland Rim REC (Springfield, TN) location were damaged by chemical carry over to the extent that the data were deemed unreliable and not included in this analysis. Eighteen of the varieties were common to both the REC and the county tests. Fourteen companies and six universities entered varieties into the tests this year. Forty-eight of the 84 varieties have been evaluated for two years (2005-2006) and 26 of the 84 have been evaluated for three years (2004-2006).

The average yield of the 81 non-insecticide treated varieties in the REC tests was 73 bu/a (range from 65 to 82 bu/a, Table 2). The average yield of the three insecticide treated varieties in the REC tests was 77 bu/a with individual varieties ranging from 75 to 79 bu/a. High yields were achieved at the Knoxville and Jackson locations (Table 2). The varieties ranged in maturity from 217 to 222 days after planting (DAP) with most of the varieties clustering around 219. The test weight values ranged from 55.1 to 60.5 lbs/bu (Table 3).

The average yield of the 20 varieties in the county tests was 75 bu/a with individual varieties ranging from 70 to 80 bu/a. The test weight values ranged from 57.0 to 59.6 lbs/bu (Table 6).

Cruiser or Gaucho Seed Treatments: The effects of the insecticide seed treatments was inconsistent among varieties and REC locations. One of the three varieties that received the seed treatment (Delta King DK 9577 Cruiser) averaged +3 across all locations, compared to untreated seed of the same variety. This response as well the other two variety comparisons which showed slightly negative yield response, are not statistically different from the untreated checks (Table 4). The range in response was from -14 to +10 bu/a at the different locations for these three varieties. The inconsistent responses are similar to results obtained in past years with systemic insecticide treated seed.

Table 1. Location information from research and education centers where the wheat variety test was conducted in 2006.

Research and Education Center	Location	Planting Date	Harvest Date	Seeding Rate	Soil Type
Highland Rim *	Springfield	11/8/2005	6/16/2006	28/ft ²	Mountview Silt Loam
Knoxville	Knoxville	10/24/2005	6/13/2006	28/ft ²	Sequoia Silty Clay Loam
Milan	Milan	10/20/2005	6/6/2006	32/ft ²	Grenada Silt Loam
Middle Tennessee	Spring Hill	11/21/2005	6/16/2006	26/ft ²	Maury Silt Loam
West Tennessee	Jackson	10/14/2005	6/9/2006	28/ft ²	Lexington Silt Loam

* Plots at the Springfield locations were damaged by chemical carry over; subsequently the data was deemed unreliable.

Table 2. Mean yields† of 84 soft red winter wheat varieties evaluated at four locations in Tennessee during 2006.

Brand	Variety	Avg. Yield	Knoxville	Spring	Jackson	Milan
		± Std Err. (n=4)‡		Hill		
		-----bu/a-----				
Pioneer	26R22	82 ± 2	87	64	104	75
AgriPro Coker	Cooper	80 ± 2	91	57	107	64
Pioneer	25R54	79 ± 2	85	60	102	71
AgriPro Coker	Branson	79 ± 2	81	64	100	70
FFR	8302	79 ± 2	73	66	110	67
USG	3342	79 ± 2	91	64	95	65
USG	3350	78 ± 2	82	62	96	74
USG	3665	78 ± 2	84	65	98	64
TN Exp	TN 601	77 ± 2	88	53	100	69
USG	3910 (Exp. 910)	77 ± 2	77	58	106	67
AgriPro Coker	Coker 9553	77 ± 2	86	59	98	65
Armor	260Z (ARX 5099)	77 ± 2	83	52	107	65
MD	MV 5-46	77 ± 2	86	62	94	64
Delta King	DK 9577	76 ± 2	83	63	94	66
Pioneer	XW04C	76 ± 2	92	54	96	62
USG	3209	76 ± 2	69	60	102	73
FFR	556	76 ± 2	79	56	99	70
USG	3477	76 ± 2	75	58	95	76
Progeny	185	76 ± 2 §	76	.	92	72
Pioneer	26R15	76 ± 2	80	57	99	66
TN Exp	TN 604	75 ± 2	74	64	101	63
Vigoro (Royster Clark)	WX 6602	75 ± 2	85	56	94	66
Vigoro (Royster Clark)	WX 5501	75 ± 2	85	58	85	71
Vigoro (Royster Clark)	WX 8501	75 ± 2	89	61	90	61
TN Exp	TN 501	75 ± 2	76	63	99	61
VA Exp.	IMI 95047-6-3-18	75 ± 2	75	58	101	65
Cache River Valley Seed	Dixie DX989	75 ± 2	85	53	103	58
Delta Grow	1600	74 ± 2	84	61	96	57
Armor	3330	74 ± 2	72	63	97	65
GA Exp.	96229-3E39	74 ± 2	91	62	88	56
Delta King	DK 9410	74 ± 2	76	55	99	65
Cropland Genetics	8301	74 ± 2	84	48	94	68
AgriPro Coker	Coker 9511 (B980582)	74 ± 2	70	67	97	60
Excel	392 TW	74 ± 2	76	61	102	56
TN Exp	TN 602	73 ± 2	80	55	97	61
GA Exp.	951079-2E31	73 ± 2	87	57	88	59
Delta Grow	4100	73 ± 2	73	53	96	69
TN Exp	TN 603	73 ± 2	64	69	90	67
Excel	211	73 ± 2	75	64	86	64
Progeny	145	72 ± 2	81	48	92	68
Excel	399	72 ± 2	69	59	95	65
MO	Bess	72 ± 2	70	61	95	62
Progeny	166	72 ± 2	79	59	85	64
Progeny	133	72 ± 2	72	60	91	65
FFR	510	72 ± 2	83	56	83	66
GA Exp.	96229-3A41	72 ± 2	82	58	86	61
VA	McCormick	72 ± 2	73	57	94	62
Delta King	DK GR 9108	71 ± 2	72	66	87	60
Delta Grow	5200	71 ± 2	71	56	90	68
Merschman	Barbie VII	71 ± 2	67	59	91	68
Excel	388	71 ± 2	69	58	91	67

(continued)

Table 2. (continued) Mean yields† of 84 soft red winter wheat varieties evaluated at four locations in Tennessee during 2006.

Brand	Variety	Avg. Yield	Knoxville	Spring	Jackson	Milan
		± Std Err. (n=4)‡		Hill		
		-----bu/a-----				
Cache River Valley Seed	Dixie 9512	71 ± 2	68	58	88	70
Delta King	DK 7710	71 ± 2	72	52	95	64
Armor	AXR 5110	71 ± 2	68	57	91	67
Vigoro (Royster Clark)	V9410	71 ± 2	73	59	84	68
Pioneer	25R37	71 ± 2	77	54	89	63
VA	Sisson	70 ± 2	67	59	91	64
Armor	3015 (ARX 5667)	70 ± 2	66	51	96	67
VA Exp.	IMI 95053-1A-11-6	70 ± 2	69	52	89	69
GA Exp.	951395-3E25	70 ± 2	70	62	89	59
Armor	3035	70 ± 2	57	54	102	67
Vigoro (Royster Clark)	V9412	69 ± 2	70	51	94	63
Excel	352 TW	69 ± 2	65	63	89	60
AgriPro Coker	Panola	69 ± 2	66	52	91	66
Renwood	3260	69 ± 2	66	55	94	61
MO	Truman	69 ± 2	62	56	94	63
Cache River Valley Seed	Dixie 500	69 ± 2	70	57	89	59
GA Exp.	951216-2E26	69 ± 2	74	56	83	62
VA	Roane	68 ± 2	72	51	94	57
Delta Grow	4500	68 ± 2	65	55	86	66
Cache River Valley Seed	Dixie 900	68 ± 2	55	57	93	68
Progeny	110	68 ± 2 §	61	.	94	65
Armor	2010	68 ± 2	68	49	91	63
AgriPro Coker	Coker 9152	67 ± 2	69	43	96	63
Merschman	Katie X	67 ± 2	67	56	87	60
MD	Choptank (MD 11-52)	67 ± 2	81	47	80	60
Progeny	196	66 ± 2	58	55	92	60
Excel	361	66 ± 2	76	51	84	54
Delta King	DK 7830	66 ± 2	62	53	84	65
GA Exp.	951395-3A31	66 ± 2	64	54	89	56
OH	Bravo	65 ± 2	65	47	92	57
Average (bu/a)		73	75	57	94	64
Varieties* -- Seed Treated with Systemic Insecticide						
Delta King	DK 9577 (Cruiser)	79 ± 2	88	56	104	69
USG	3350 (Gaucho)	76 ± 2	74	59	98	74
FFR	8302 (Gaucho)	75 ± 2	75	59	96	72
Average (bu/a)		77	79	58	99	71
L.S.D._{.05} (bu/a)		5	12	11	13	6
C.V. (%)		9.0	9.9	11.7	8.3	5.9

† All yields are adjusted to 13.5% moisture.

‡ n = number of environments

§ All plots of this variety had very poor stand at the Spring Hill location; the average yield is an adjusted least squares estimate.

* Tested in the same trial with untreated varieties

Table 3. Mean yields† and agronomic characteristics of 84 soft red winter wheat varieties evaluated at four locations in Tennessee during 2006.

Brand	Variety	Avg. Yield	Moisture	Test			
		± Std Err. (n=4)‡		(n=4)	Weight# (n=2)	Maturity (n=4)	Height (n=4)
		bu/a	%	lbs/bu	DAP	in.	Score
Pioneer	26R22	82 ± 2	12.8	56.9	219	35	1.0
AgriPro Coker	Cooper	80 ± 2	12.7	58.2	219	34	1.0
Pioneer	25R54	79 ± 2	12.3	57.5	218	35	1.0
AgriPro Coker	Branson	79 ± 2	12.5	56.7	217	33	1.0
FFR	8302	79 ± 2	12.9	57.7	219	35	1.0
USG	3342	79 ± 2	12.2	57.6	217	29	1.1
USG	3350	78 ± 2	12.3	56.8	219	37	1.0
USG	3665	78 ± 2	12.1	57.6	219	35	1.1
TN Exp	TN 601	77 ± 2	12.6	57.0	218	34	1.1
USG	3910 (Exp. 910)	77 ± 2	12.8	58.7	220	35	1.0
AgriPro Coker	Coker 9553	77 ± 2	12.7	59.7	217	34	1.0
Armor	260Z (ARX 5099)	77 ± 2	12.4	58.0	218	35	1.0
MD	MV 5-46	77 ± 2	12.7	58.6	217	33	1.2
Delta King	DK 9577	76 ± 2	12.5	58.1	218	33	1.0
Pioneer	XW04C	76 ± 2	12.6	60.5	218	33	1.0
USG	3209	76 ± 2	12.6	55.7	219	31	1.3
FFR	556	76 ± 2	11.8	56.2	218	33	1.1
USG	3477	76 ± 2	12.9	56.6	220	38	1.0
Progeny	185	76 ± 2 §	12.5	55.6	221	33	1.0
Pioneer	26R15	76 ± 2	12.3	56.6	219	34	1.0
TN Exp	TN 604	75 ± 2	12.2	55.8	220	37	1.1
Vigoro (Royster Clark)	WX 6602	75 ± 2	12.7	58.8	218	33	1.1
Vigoro (Royster Clark)	WX 5501	75 ± 2	12.8	56.8	220	38	1.0
Vigoro (Royster Clark)	WX 8501	75 ± 2	12.2	58.7	218	34	1.0
TN Exp	TN 501	75 ± 2	12.4	56.9	220	39	1.4
VA Exp.	IMI 95047-6-3-18	75 ± 2	12.1	55.4	218	35	1.0
Cache River Valley Seed	Dixie DX989	75 ± 2	12.2	58.5	219	34	1.1
Delta Grow	1600	74 ± 2	12.3	57.9	219	35	1.0
Armor	3330	74 ± 2	12.7	56.2	219	38	1.0
GA Exp.	96229-3E39	74 ± 2	12.4	58.8	219	35	1.0
Delta King	DK 9410	74 ± 2	12.7	56.9	220	38	1.0
Cropland Genetics	8301	74 ± 2	12.8	59.1	219	35	1.1
AgriPro Coker	Coker 9511 (B980582)	74 ± 2	12.9	57.6	217	37	1.3
Excel	392 TW	74 ± 2	12.7	56.8	220	38	1.4
TN Exp	TN 602	73 ± 2	12.6	59.4	219	37	1.0
GA Exp.	951079-2E31	73 ± 2	12.7	58.7	217	34	1.3
Delta Grow	4100	73 ± 2	12.5	57.2	220	36	1.0
TN Exp	TN 603	73 ± 2	13.5	56.7	220	38	1.3
Excel	211	73 ± 2	12.4	56.3	218	37	1.2
Progeny	145	72 ± 2	12.2	56.1	219	37	1.0
Excel	399	72 ± 2	12.4	56.1	220	37	1.1
MO	Bess	72 ± 2	12.6	56.6	219	35	1.0
Progeny	166	72 ± 2	12.6	57.3	219	37	1.0
Progeny	133	72 ± 2	12.3	56.0	219	37	1.0
FFR	510	72 ± 2	12.2	56.4	217	34	1.0
GA Exp.	96229-3A41	72 ± 2	12.3	57.8	218	35	1.0
VA	McCormick	72 ± 2	13.0	58.6	219	32	1.1
Delta King	DK GR 9108	71 ± 2	12.6	56.5	219	37	1.3
Delta Grow	5200	71 ± 2	12.6	57.3	220	37	1.0
Merschman	Barbie VII	71 ± 2	12.3	55.6	220	37	1.0
Excel	388	71 ± 2	12.5	56.0	219	37	1.0

(continued)

Table 3. (continued) Mean yields† and agronomic characteristics of 84 soft red winter wheat varieties evaluated at four locations in Tennessee during 2006.

Brand	Variety	Avg. Yield	Test				
		± Std Err. (n=4)‡	Moisture (n=4)	Weight# (n=2)	Maturity (n=4)	Height (n=4)	Lodging (n=2)
		bu/a	%	lbs/bu	DAP	in.	Score
Cache River Valley Seed	Dixie 9512	71 ± 2	12.4	55.3	219	37	1.1
Delta King	DK 7710	71 ± 2	12.6	57.8	220	37	1.0
Armor	AXR 5110	71 ± 2	12.8	56.5	220	37	1.0
Vigoro (Royster Clark)	V9410	71 ± 2	12.5	55.8	219	37	1.1
Pioneer	25R37	71 ± 2	12.6	58.5	220	34	1.0
VA	Sisson	70 ± 2	12.2	56.0	218	32	1.3
Armor	3015 (ARX 5667)	70 ± 2	12.3	56.9	219	33	1.0
VA Exp.	IMI 95053-1A-11-6	70 ± 2	11.8	55.7	217	35	2.0
GA Exp.	951395-3E25	70 ± 2	12.4	57.9	219	32	1.0
Armor	3035	70 ± 2	12.3	55.7	219	38	1.0
Vigoro (Royster Clark)	V9412	69 ± 2	12.5	58.1	219	34	1.0
Excel	352 TW	69 ± 2	12.2	56.6	219	36	1.1
AgriPro Coker	Panola	69 ± 2	12.2	56.2	217	33	1.3
Renwood	3260	69 ± 2	12.2	57.2	217	34	1.0
MO	Truman	69 ± 2	15.5	56.2	222	39	1.0
Cache River Valley Seed	Dixie 500	69 ± 2	12.6	57.1	220	37	1.0
GA Exp.	951216-2E26	69 ± 2	12.4	57.9	219	35	1.0
VA	Roane	68 ± 2	12.8	57.7	220	32	1.0
Delta Grow	4500	68 ± 2	12.4	56.3	219	38	1.1
Cache River Valley Seed	Dixie 900	68 ± 2	12.6	56.1	218	37	1.0
Progeny	110	68 ± 2 §	12.5	55.4	219	37	1.0
Armor	2010	68 ± 2	12.5	56.6	218	36	1.0
AgriPro Coker	Coker 9152	67 ± 2	12.2	57.0	219	37	1.0
Merschman	Katie X	67 ± 2	12.4	57.1	219	37	1.0
MD	Choptank (MD 11-52)	67 ± 2	11.9	57.8	217	29	1.0
Progeny	196	66 ± 2	11.8	55.1	219	31	1.0
Excel	361	66 ± 2	12.7	58.9	220	38	1.0
Delta King	DK 7830	66 ± 2	12.6	55.4	219	37	1.3
GA Exp.	951395-3A31	66 ± 2	12.3	57.6	219	31	1.0
OH	Bravo	65 ± 2	12.6	58.2	218	36	1.2

Varieties* -- Seed Treated with Systemic Insecticide

Delta King	DK 9577 (Cruiser)	79 ± 2	12.3	57.9	217	33	1.0
USG	3350 (Gaucho)	76 ± 2	12.9	56.8	220	37	1.0
FFR	8302 (Gaucho)	75 ± 2	12.5	57.6	219	36	1.0

† All yields are adjusted to 13.5% moisture.

‡ n = number of environments

§ all plots of this variety had very poor stand at the Spring Hill location; the average yield is an adjusted least squares estimate.

Official test weight of No. 2 wheat = 58 lbs/bu.

* Tested in the same trial with untreated varieties

Maturity (DAP) = Days after planting

Lodging = 1 to 5 scale; where 1 = 95% of plants erect; 2.5 = ~50% of plants leaning at angle ≥ 45°; 5 = 95+% of plants leaning at an angle ≥ 45°.

Table 4. Yield† comparisons of three soft red winter wheat varieties between seed treated versus untreated with a systemic insecticide evaluated at four locations in Tennessee during 2006. ‡

Brand	Variety	Avg. Yield	Knoxville	Spring Hill	Jackson	Milan	Avg. Yield Difference
		± Std Err. (n=4)					
Delta King	DK 9577 (Cruiser)	79 ± 2	88	56	104	69	3
Delta King	DK 9577	76 ± 2	83	63	94	66	
USG	3350 (Gaucho)	76 ± 2	74	59	98	74	-2
USG	3350	78 ± 2	82	62	96	74	
FFR	8302 (Gaucho)	75 ± 2	75	59	96	72	-4
FFR	8302	79 ± 2	73	66	110	67	
Average -- Treated Seed (bu/a)		77	79	58	99	71	-1
Average -- Untreated Seed (bu/a)		78	79	63	100	69	
L.S.D._{.05} (bu/a)		5	12	11	13	6	
C.V. (%)		9.0	9.9	11.7	8.3	5.9	

† All yields are adjusted to 13.5% moisture.

‡ All varieties were treated with fungicide.

Table 5. Comparisons of overall mean yield† and agronomic characteristics of three soft red winter wheat varieties between seed treated versus untreated with a systemic insecticide evaluated at four locations in Tennessee during 2006. ‡

Brand	Variety	Avg. Yield	Moisture (n=4)	Test Weight§ (n=2)	Maturity (n=4)	Height (n=4)	Lodging (n=2)
		± Std Err. (n=4)					
Delta King	DK 9577 (Cruiser)	79 ± 2	12.3	57.9	217	33	1.0
Delta King	DK 9577	76 ± 2	12.5	58.1	218	33	1.0
USG	3350 (Gaucho)	76 ± 2	12.9	56.8	220	37	1.0
USG	3350	78 ± 2	12.3	56.8	219	37	1.0
FFR	8302 (Gaucho)	75 ± 2	12.5	57.6	219	36	1.0
FFR	8302	79 ± 2	12.9	57.7	219	35	1.0

† All yields are adjusted to 13.5% moisture.

‡ All varieties were treated with fungicide.

§ Official test weight of No. 2 wheat = 58 lbs/bu.

Maturity (DAP) = Days after planting

Lodging = 1 to 5 scale; where 1 = 95% of plants erect; 2.5 = ~50% of plants leaning at angle ≥ 45°; 5 = 95+% of plants leaning at an angle ≥ 45°.

Table 6. Yields† of 20 soft red winter wheat varieties evaluated in ten County Standard Tests in Tennessee during 2006.

MS	Brand/Variety	Avg.	Test			Gibson	Gibson	Henry	Lake	Moore	Weakley	Weakley	Weakley	Madison
		Yield	Moisture	Weight‡	Dyer	(King farm)	(Steele farm)				(UT Martin 1)	(UT Martin 2)	(Hall farm)	(WTREC)
		bu/a	%	lbs/bu	-----bu/a-----									
A	Pioneer 26R15	79.9	13.0	59.0	116.6	78.5	67.5	49.2	65.9	77.9	89.2	86.1	73.4	95.2
AB	**FFR 8302	79.1	13.4	59.1	123.1	73.5	70.7	48.7	62.9	79.0	80.1	79.8	73.6	99.5
ABC	Vigoro 9412	76.8	13.0	58.3	111.4	68.0	69.5	54.8	58.7	79.4	83.5	77.2	70.7	94.5
ABC	***FFR 556	76.1	13.0	57.0	121.3	70.9	70.3	49.4	56.7	77.1	85.7	74.0	72.8	82.6
ABC	***USG 3209	75.9	13.4	58.5	114.8	65.3	77.6	58.8	64.5	72.7	73.9	62.6	70.9	98.2
ABC	**USG 3350	75.8	13.3	58.8	103.7	70.0	68.7	54.0	61.0	76.1	78.1	82.2	70.2	93.8
ABC	Croplan 8301	75.8	13.1	58.3	120.9	64.5	76.9	45.0	55.5	74.7	84.3	74.4	69.5	91.9
ABC	Merschman Barbie VII	75.7	13.2	58.1	103.5	69.3	65.8	58.4	67.3	77.3	77.1	76.2	63.7	98.7
ABC	Pioneer 26R58	75.6	12.5	57.5	114.6	76.7	72.7	45.9	67.3	71.9	77.3	71.6	69.1	89.3
ABC	*Delta King 9577	75.6	13.1	57.3	113.2	69.6	77.2	55.4	78.1	66.3	74.1	68.5	61.6	92.1
BC	Vigoro 9410	75.2	13.3	58.5	103.8	67.5	70.0	62.6	61.4	77.9	77.6	74.2	66.8	90.1
BCD	*AgriPro/Coker Panola	75.0	12.9	57.6	116.3	65.2	70.7	59.8	66.2	66.1	75.1	67.2	71.7	91.1
BCD	USG 3477	74.8	13.0	58.1	109.0	71.6	73.2	48.5	61.5	70.6	78.7	76.6	67.5	90.7
CD	*CRV/Dixie 900	74.5	13.4	58.4	106.5	69.5	69.6	55.5	56.4	73.6	79.2	75.2	67.3	92.2
CD	AgriPro/Coker 9553	74.2	13.2	59.6	118.7	64.8	69.1	44.6	59.8	71.0	81.3	72.1	67.6	92.9
CD	*Progeny 166	74.1	13.1	57.7	100.9	67.9	74.4	51.8	64.0	67.4	78.0	77.0	72.0	87.9
CD	CRV/Dixie 357	73.6	13.4	57.4	108.3	71.9	73.2	36.7	58.7	76.4	75.0	73.4	68.3	94.7
CD	Progeny 145	72.2	13.3	57.8	106.5	57.6	76.0	57.6	57.9	71.5	75.1	66.6	67.4	86.2
D	Delta King 7830	70.6	13.1	58.0	108.5	64.3	70.1	49.2	59.3	68.8	66.9	69.2	67.6	81.7
D	Merschman Katie X	70.4	13.4	57.5	89.4	60.2	66.0	56.3	60.5	83.4	68.6	69.1	68.4	82.6
Average		75.0	13.2	58.1	110.5	68.3	71.4	52.1	62.2	73.9	77.9	73.7	69.0	91.3

† Yields have been adjusted to 13.5% moisture. Each variety was evaluated in a large strip-plot at each location, thus each county test was considered as one replication of the test in calculating the average yield and in conducting the statistical analysis to determine significant differences (MS).

‡ Official test weight of No. 2 wheat = 58 lbs/bu.

MS = Varieties that have any MS letter in common are not statistically different in yield at the 5% level of probability.

Varieties denoted with an asterisk (*), (**), or (***) were in the top performing group in 2005 and/or 2004 & 2003.

WTREC = West Tennessee Research and Education Center, Jackson, TN.

Data provided by Robert C. Williams, Ext. Area Specialist, Grain Crops, and extension agents in counties shown above.

Table 7. Yields† , moistures, and test weights of 18 soft red winter wheat varieties evaluated in both the County Standard Tests (n=10) and Research and Education Center (REC) Tests (n=4) in Tennessee during 2006.

Brand	Variety	County Standard Tests			R E C Tests		
		Avg. Yield	Moisture	Test Weight‡	Avg. Yield	Moisture	Test Weight
		bu/a	%	lbs/bu	bu/a	%	lbs/bu
Pioneer	26R15	80	13.0	59.0	76	12.3	56.6
FFR	8302	79	13.4	59.1	79	12.9	57.7
Vigoro (Royster Clark)	V9412	77	13.0	58.3	69	12.5	58.1
FFR	556	76	13.0	57.0	76	11.8	56.2
USG	3209	76	13.4	58.5	76	12.6	55.7
Cropland Genetics	8301	76	13.1	58.3	74	12.8	59.1
USG	3350	76	13.3	58.8	78	12.3	56.8
Merschman	Barbie VII	76	13.2	58.1	71	12.3	55.6
Delta King	DK 9577	76	13.1	57.3	76	12.5	58.1
Vigoro (Royster Clark)	V9410	75	13.3	58.5	71	12.5	55.8
AgriPro Coker	Panola	75	12.9	57.6	69	12.2	56.2
USG	3477	75	13.0	58.1	76	12.9	56.6
Cache River Valley Seed	Dixie 900	75	13.4	58.4	68	12.6	56.1
AgriPro Coker	Coker 9553	74	13.2	59.6	77	12.7	59.7
Progeny	166	74	13.1	57.7	72	12.6	57.3
Progeny	145	72	13.3	57.8	72	12.2	56.1
Delta King	DK 7830	71	13.1	58.0	66	12.6	55.4
Merschman	Katie X	70	13.4	57.5	67	12.4	57.1
Average		75	13.2	58.2	73	12.5	56.9

† All yields are adjusted to 13.5% moisture.

‡ Official test weight of No. 2 wheat = 58 lbs/bu.

Table 8. Mean yields† of 48 soft red winter wheat varieties evaluated at four locations (n=8) in Tennessee for two years, 2005 - 2006.

Brand	Variety	Avg. Yield	Spring			
		± Std Err. (n=8)‡	Knoxville	Hill	Jackson	Milan
		-----bu/a-----				
Pioneer	26R22	79 ± 2	94	76	87	60
USG	3350	77 ± 2	91	72	87	58
AgriPro Coker	Cooper	77 ± 2	97	67	88	55
AgriPro Coker	Coker 9553	75 ± 2	95	69	86	52
Pioneer	25R54	75 ± 2	94	72	84	52
Pioneer	26R15	74 ± 2	90	70	83	53
USG	3910 (Exp. 910)	74 ± 2	88	66	87	53
Delta King	DK 9410	73 ± 2	81	67	86	60
Armor	3330	73 ± 2	82	76	87	47
Progeny	185	73 ± 2	88	70	80	55
USG	3209	73 ± 2	87	65	85	55
FFR	8302	73 ± 2	84	70	84	54
Armor	260Z (ARX 5099)	73 ± 2	91	66	84	51
Vigoro (Royster Clark)	V9410	72 ± 2	79	68	81	59
Delta King	DK 9577	72 ± 2	90	74	77	47
Progeny	133	71 ± 2	78	71	80	56
Pioneer	25R37	70 ± 2	81	68	82	50
Armor	3015 (ARX 5667)	70 ± 2	77	67	79	58
Progeny	145	70 ± 2	82	61	78	59
Delta Grow	4100	70 ± 2	81	62	85	51
Cache River Valley Seed	Dixie 900	69 ± 2	72	70	81	53
AgriPro Coker	Coker 9511 (B980582)	69 ± 2	80	73	76	48
Delta Grow	5200	69 ± 2	80	66	75	55
Armor	3035	69 ± 2	70	66	86	53
GA Exp.	951079-2E31	69 ± 2	82	69	74	51
MD	MV 5-46	69 ± 2	90	67	69	49
Vigoro (Royster Clark)	V9412	69 ± 2	81	63	76	56
Delta King	DK 7710	68 ± 2	77	65	79	53
FFR	556	68 ± 2	89	60	73	52
VA	McCormick	68 ± 2	84	65	75	49
TN Exp	TN 501	68 ± 2	73	70	77	51
Armor	2010	68 ± 2	75	63	87	46
AgriPro Coker	Coker 9152	68 ± 2	76	60	80	55
Progeny	166	68 ± 2	82	66	72	50
VA	Roane	68 ± 2	82	61	80	48
Progeny	110	67 ± 2	73	61	80	52
GA Exp.	951216-2E26	66 ± 2	80	64	68	51
Delta King	DK 7830	66 ± 2	70	64	75	54
FFR	510	65 ± 2	92	60	60	49
Renwood	3260	64 ± 2	76	58	76	47
AgriPro Coker	Panola	64 ± 2	76	65	70	47
MO	Truman	64 ± 2	73	60	72	51
MD	Choptank (MD 11-52)	63 ± 2	85	54	68	45
Delta Grow	4500	60 ± 2	69	56	71	46
Average (bu/a)		70	82	66	79	52

(Continued)

Table 8. (continued) Mean yields† of 48 soft red winter wheat varieties evaluated at four locations (n=8) in Tennessee for two years, 2005 - 2006.

Brand	Variety	Avg. Yield	Spring			
		± Std Err. (n=8)‡	Knoxville	Hill	Jackson	Milan
		-----bu/a-----				
Varieties* -- Seed Treated with Systemic Insecticide						
Delta King	DK 9577 (Cruiser)	74 ± 2	95	70	85	48
USG	3350 (Gaucho)	74 ± 2	88	71	79	58
FFR	8302 (Gaucho)	72 ± 2	87	74	72	56
Average (bu/a)		74	90	72	79	54
L.S.D._{.05} (bu/a)		6	9	11	16	9
C.V. (%)		11.1	7.9	11.0	13.3	12.2

† All yields are adjusted to 13.5% moisture.

‡ n = number of environments

* Tested in the same trial with untreated varieties

Table 9. Mean yields† and agronomic characteristics of 48 soft red winter wheat varieties evaluated at four locations (n=8) in Tennessee for two years, 2005 - 2006.

Brand	Variety	Avg. Yield		Test			Stripe	Leaf	
		± Std Err. (n=8)‡	Moisture (n=9)	Weight§ (n=5)	Maturity (n=8)	Height (n=9)	Lodging (n=3)	Rust (n=1)	Diseases (n=1)
		bu/a	%	lbs/bu	DAP	in.	Score	Score	Score
Pioneer	26R22	79 ± 2	13.6	57.2	220	36	1.1	1.0	3.5
USG	3350	77 ± 2	13.4	57.6	220	39	1.1	1.0	4.8
AgriPro Coker	Cooper	77 ± 2	13.2	58.1	221	35	1.1	3.7	3.0
AgriPro Coker	Coker 9553	75 ± 2	13.4	59.1	218	35	1.2	1.0	2.3
Pioneer	25R54	75 ± 2	13.1	57.4	220	35	1.0	1.0	3.2
Pioneer	26R15	74 ± 2	12.9	57.1	221	35	1.1	2.5	2.7
USG	3910 (Exp. 910)	74 ± 2	13.1	58.4	221	36	1.2	4.7	3.0
Delta King	DK 9410	73 ± 2	13.6	57.6	220	39	1.2	1.0	3.3
Armor	3330	73 ± 2	13.7	57.3	220	38	1.2	1.0	2.5
Progeny	185	73 ± 2	13.3	56.8	221	34	1.1	2.8	2.3
USG	3209	73 ± 2	13.5	57.6	220	32	1.4	3.3	3.2
FFR	8302	73 ± 2	13.7	58.5	221	35	1.2	1.0	3.8
Armor	260Z (ARX 5099)	73 ± 2	13.1	58.2	220	35	1.3	1.0	2.5
Vigoro (Royster Clark)	V9410	72 ± 2	13.4	56.9	220	39	1.2	1.0	2.2
Delta King	DK 9577	72 ± 2	13.2	58.2	219	34	1.2	1.2	3.0
Progeny	133	71 ± 2	13.4	57.3	220	38	1.2	1.0	3.0
Pioneer	25R37	70 ± 2	14.0	58.6	221	35	1.0	1.2	3.8
Armor	3015 (ARX 5667)	70 ± 2	12.7	57.2	220	34	1.1	1.8	2.3
Progeny	145	70 ± 2	13.3	57.2	220	39	1.2	1.0	3.3
Delta Grow	4100	70 ± 2	13.7	57.9	221	38	1.1	1.0	3.5
Cache River Valley Seed	Dixie 900	69 ± 2	13.8	57.2	219	38	1.2	1.0	3.5
AgriPro Coker	Coker 9511	69 ± 2	13.6	58.8	219	37	1.5	2.7	4.0
Delta Grow	5200	69 ± 2	13.6	57.9	221	38	1.1	1.0	3.5
Armor	3035	69 ± 2	13.5	57.3	221	39	1.2	1.0	4.5
GA Exp.	951079-2E31	69 ± 2	13.1	58.3	219	35	1.9	1.0	1.8
MD	MV 5-46	69 ± 2	13.7	58.5	220	33	1.1	3.7	3.5
Vigoro (Royster Clark)	V9412	69 ± 2	13.9	58.7	220	35	1.3	3.3	4.2
Delta King	DK 7710	68 ± 2	13.6	58.0	221	38	1.2	1.0	3.3
FFR	556	68 ± 2	12.8	57.0	220	32	1.1	3.5	4.8
VA	McCormick	68 ± 2	13.8	59.2	220	32	1.1	1.0	3.3
TN Exp	TN 501	68 ± 2	13.2	57.8	221	40	1.8	1.2	3.7
Armor	2010	68 ± 2	13.4	57.7	220	38	1.2	1.0	1.5
AgriPro Coker	Coker 9152	68 ± 2	12.6	57.2	219	38	1.7	1.0	2.3
Progeny	166	68 ± 2	13.6	57.6	221	39	1.2	1.0	3.0
VA	Roane	68 ± 2	13.9	59.3	221	33	1.0	2.3	3.0
Progeny	110	67 ± 2	13.4	57.0	220	38	1.1	2.0	3.7
GA Exp.	951216-2E26	66 ± 2	13.0	58.4	220	35	1.1	1.0	2.5
Delta King	DK 7830	66 ± 2	13.3	56.8	220	39	1.4	1.0	3.0
FFR	510	65 ± 2	13.1	56.2	218	35	1.3	5.0	3.7
Renwood	3260	64 ± 2	13.0	58.0	219	34	1.2	4.8	2.5
AgriPro Coker	Panola	64 ± 2	12.8	56.6	220	34	1.4	1.0	2.5
MO	Truman	64 ± 2	15.5	57.8	224	39	1.1	1.2	4.5
MD	Choptank	63 ± 2	12.5	57.9	219	30	1.1	3.5	2.5
Delta Grow	4500	60 ± 2	13.3	57.3	222	38	1.2	1.0	2.5

(continued)

Table 9. (continued) Mean yields† and agronomic characteristics of 48 soft red winter wheat varieties evaluated at four locations (n=8) in Tennessee for two years, 2005 - 2006.

Brand	Variety	Avg. Yield	Test			Height	Lodging	Stripe	Leaf
		± Std Err.	Moisture	Weight§	Maturity			Rust	Diseases
		(n=8)‡	(n=9)	(n=5)	(n=8)	(n=9)	(n=3)	(n=1)	(n=1)
		bu/a	%	lbs/bu	DAP	in.	Score	Score	Score
Varieties* -- Seed Treated with Systemic Insecticide									
Delta King	DK 9577 (Cruiser)	74 ± 2	13.0	58.0	219	34	1.6	1.0	3.0
USG	3350 (Gaucho)	74 ± 2	13.7	57.4	221	38	1.2	1.0	3.0
FFR	8302 (Gaucho)	72 ± 2	13.8	58.6	221	36	1.3	1.0	4.0

† All yields are adjusted to 13.5% moisture.

‡ n = number of environments

§ Official test weight of No. 2 wheat = 58 lbs/bu.

* Tested in the same trial with untreated varieties

Maturity (DAP) = Days after planting

Lodging = 1 to 5 scale; where 1 = 95% of plants erect; 2.5 = ~50% of plants leaning at angle ≥ 45°; 5 = 95+% of plants leaning at an angle ≥ 45°.

Stripe Rust, Leaf Disease - 1 to 5 scale; where 1 = 95% of plants non-infected;

2.5 = ~50% of plants infected; 5 = 95+% of plants infected.

Stripe Rust and Leaf Disease ratings taken at the West Tennessee Experiment Station, Jackson, TN in 2005.

Table 10. Mean yields† of 26 soft red winter wheat varieties evaluated at four locations (n=12) in Tennessee for three years, 2004 - 2006.

Brand	Variety	Avg. Yield ± Std Err. (n=12)‡	Spring			
			Knoxville	Hill	Jackson	Milan
-----bu/a-----						
Cache River Valley Seed	Dixie 900	73 ± 1	71	77	86	58
AgriPro Coker	Cooper	72 ± 1	86	64	82	56
Pioneer	26R15	72 ± 1	80	69	81	58
Delta King	DK 9410	72 ± 1	72	66	86	63
Armor	3330	72 ± 1	75	75	84	53
FFR	8302	71 ± 1	77	67	83	58
Delta King	DK 9577	71 ± 1	83	71	79	52
Progeny	133	70 ± 1	70	69	81	59
Vigoro (Royster Clark)	V9410	69 ± 1	68	70	81	58
VA	Roane	68 ± 1	78	64	79	52
Pioneer	25R37	68 ± 1	75	65	79	54
Armor	3035	68 ± 1	65	67	85	57
AgriPro Coker	Coker 9152	67 ± 1	69	64	78	58
Progeny	145	67 ± 1	71	64	77	57
Progeny	166	67 ± 1	73	67	75	54
Vigoro (Royster Clark)	V9412	67 ± 1	70	61	78	59
Progeny	110	67 ± 1	63	67	79	59
MD	MV 5-46	67 ± 1	80	66	70	51
FFR	556	67 ± 1	81	58	74	53
Renwood	3260	66 ± 1	72	65	77	51
VA	McCormick	66 ± 1	77	61	75	50
FFR	510	64 ± 1	77	66	66	47
MO	Truman	63 ± 1	67	64	69	52
Delta Grow	4500	61 ± 1	65	57	74	49
MD	Choptank (MD 11-52)	61 ± 1	74	56	66	47
Variety* -- Seed Treated with Systemic Insecticide						
USG	3350 (Gaucho)	77 ± 1	84	78	85	62
Average (bu/a)		68	74	66	78	55
L.S.D._{.05} (bu/a)		5	9	11	13	9
C.V. (%)		10.8	8.5	11.4	11.6	11.6

† All yields are adjusted to 13.5% moisture.

‡ n = number of environments

* Tested in the same trial with untreated varieties

Table 11. Mean yields† and agronomic characteristics of 26 soft red winter wheat varieties evaluated at four locations (n=12) in Tennessee for three years, 2004 - 2006.

Brand	Variety	Avg. Yield	Moisture	Test			Lodging	BYD	Stripe	Leaf
		± Std Err. (n=12)‡		(n=14)	Weight§ (n=7)	Maturity (n=13)		Height (n=14)	Virus (n=1)	Rust (n=1)
		bu/a	%	lbs/bu	DAP	in.	Score	Score	Score	Score
Cache River Valley Seed	Dixie 900	73 ± 1	13.8	55.9	221	38	1.3	1.9	1.0	3.5
AgriPro Coker	Cooper	72 ± 1	13.6	56.5	221	34	1.1	2.1	3.7	3.0
Pioneer	26R15	72 ± 1	13.2	55.6	222	35	1.3	1.7	2.5	2.7
Delta King	DK 9410	72 ± 1	13.9	56.6	221	39	1.3	1.9	1.0	3.3
Armor	3330	72 ± 1	13.8	56.3	221	38	1.3	1.7	1.0	2.5
FFR	8302	71 ± 1	14.0	57.3	222	35	1.3	2.4	1.0	3.8
Delta King	DK 9577	71 ± 1	13.5	56.8	220	34	1.3	1.9	1.2	3.0
Progeny	133	70 ± 1	13.8	56.2	221	38	1.3	2.3	1.0	3.0
Vigoro (Royster Clark)	V9410	69 ± 1	13.6	55.9	221	38	1.3	2.4	1.0	2.2
VA	Roane	68 ± 1	14.1	58.5	222	33	1.1	1.6	2.3	3.0
Pioneer	25R37	68 ± 1	14.0	57.3	222	34	1.1	1.9	1.2	3.8
Armor	3035	68 ± 1	13.8	56.2	222	38	1.3	1.8	1.0	4.5
AgriPro Coker	Coker 9152	67 ± 1	13.0	56.1	220	38	1.7	2.4	1.0	2.3
Progeny	145	67 ± 1	13.6	56.0	221	38	1.3	2.3	1.0	3.3
Progeny	166	67 ± 1	13.9	56.5	221	38	1.3	2.0	1.0	3.0
Vigoro (Royster Clark)	V9412	67 ± 1	13.9	57.1	221	35	1.4	2.9	3.3	4.2
Progeny	110	67 ± 1	13.6	56.1	220	38	1.3	2.7	2.0	3.7
MD	MV 5-46	67 ± 1	13.8	57.4	220	33	1.2	2.5	3.7	3.5
FFR	556	67 ± 1	13.1	55.6	221	33	1.1	2.2	3.5	4.8
Renwood	3260	66 ± 1	13.6	57.1	220	34	1.3	2.2	4.8	2.5
VA	McCormick	66 ± 1	14.1	57.9	221	32	1.2	2.6	1.0	3.3
FFR	510	64 ± 1	13.4	55.5	219	35	1.3	3.7	5.0	3.7
MO	Truman	63 ± 1	15.2	56.6	224	38	1.3	1.8	1.2	4.5
Delta Grow	4500	61 ± 1	13.8	56.2	222	38	1.3	2.1	1.0	2.5
MD	Choptank (MD 1	61 ± 1	12.8	56.1	220	30	1.2	2.3	3.5	2.5

Variety* -- Seed Treated with Systemic Insecticide

USG	3350 (Gaucho)	77 ± 1	13.9	56.3	221	38	1.3	1.6	1.0	3.0
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† All yields are adjusted to 13.5% moisture.

‡ n = number of environments

§ Official test weight of No. 2 wheat = 58 lbs/bu.

* Tested in the same trial with untreated varieties

Maturity (DAP) = Days after planting

Lodging = 1 to 5 scale; where 1 = 95% of plants erect; 2.5 = ~50% of plants leaning at angle ≥ 45°; 5 = 95+% of plants leaning at an angle ≥ 45°.

Stripe Rust, Leaf Disease, BYD = Barley Yellow Dwarf Virus - 1 to 5 scale; where 1 = 95% of plants non-infected; 2.5 = ~50% of plants infected; 5 = 95+% of plants infected.

BYD notes taken at the Knoxville location in 2004. Stripe Rust and Leaf Disease ratings taken at the West Tennessee Experiment Station, Jackson, TN in 2005.

Barley

Results

Three released varieties and one experimental line of barley were tested during 2006 at five Research and Education Centers (REC) representing the different physiographic regions of Tennessee. Three of the four varieties (Doyce, Price, and Thoroughbred) have been evaluated for three years. All of the varieties evaluated in these tests were developed in the Barley Breeding Program at Virginia Tech. The variety, Doyce and the experimental line VA01H-68, are hull-less types. Disease ratings were recorded at the West Tennessee REC (Jackson, TN) for barley yellow dwarf virus.

The average yield of the four entries across the five locations was 81 bu/a, with a range from 77 to 87 bu/a. The highest yields were obtained at Spring Hill where the location mean of the four entries was 88 bu/a and the highest variety yield was 92 bu/a (Thoroughbred). The maturity of the barley entries clustered around 220 DAP. The barley varieties adapted to Tennessee generally mature about a week to ten days earlier than adapted wheat varieties. The test weights of the barley entries ranged from 43.5 to 57.0 lbs/bu, with most of the entries being 45.5 lbs/bu. Doyce and VA01H-68 have higher test weights (53.0 and 57.0 respectively) due to the hull-less nature of their grain. The official test weight for barley is 48 lbs/bu compared to 58 lbs/bu for wheat.

Table 12. Location information from research and education centers where the barley variety test was conducted in 2006.

Research and Education Center	Location	Planting Date	Harvest Date	Seeding Rate	Soil Type
Highland Rim	Springfield	11/8/2005	6/16/2006	28/ft ²	Mountview Silt Loam
Knoxville	Knoxville	10/24/2005	6/9/2006	28/ft ²	Sequoia Silty Clay Loam
Milan	Milan	10/20/2005	6/6/2006	32/ft ²	Grenada Silt Loam
Middle Tennessee	Spring Hill	11/21/2005	6/16/2006	26/ft ²	Maury Silt Loam
West Tennessee	Jackson	10/14/2005	6/9/2006	28/ft ²	Lexington Silt Loam

Table 13. Mean yields† of four six-rowed barley varieties evaluated at five locations in Tennessee during 2006.

Brand	Variety	Avg. Yield ± Std Err. (n=5)‡	Spring				
			Knoxville	Springfield	Hill	Jackson Milan	
VA	Thoroughbred	87 ± 3	90	94	92	86	71
VA	Doyce (Hulless)	81 ± 3	72	87	85	85	74
VA	VA01H-68 (Hulless)	80 ± 2	91	76	88	71	75
VA	Price	77 ± 2	86	77	86	64	71
Average (bu/a)		81	85	83	88	77	73
L.S.D._{.05} (bu/a)		7	30	9	16	22	1
C.V. (%)		11.9	17.9	5.4	8.9	14.6	0.5

† All yields are adjusted to 13.5% moisture.

‡ n = number of environments

Table 14. Mean yields† and agronomic characteristics of four six-rowed barley varieties evaluated at five locations in Tennessee during 2006.

Brand	Variety	Avg. Yield ± Std Err. (n=2)‡	Moisture (n=2)	Test Weight§ (n=3)	Maturity (n=4)	Height (n=5)	Lodging (n=2)	Barley
								Yellow Dwarf (n=1)
VA	Thoroughbred	87 ± 3	11.0	45.2	220	32	2.6	1.7
VA	Doyce (Hulless)	81 ± 3	12.0	53.0	220	31	2.8	1.5
VA	VA01H-68 (Hulless)	80 ± 2	12.7	57.0	220	32	2.1	3.8
VA	Price	77 ± 2	10.7	43.4	220	28	3.2	2.7

† All yields are adjusted to 13.5% moisture.

‡ n = number of environments

§ Official test weight of No. 1 barley = 48 lbs/bu.

Maturity (DAP) = Days after planting

Lodging = 1 to 5 scale; where 1 = 95% of plants erect; 2.5 = ~50% of plants leaning at angle ≥ 45°; 5 = 95+% of plants leaning at an angle ≥ 45°.

Barley Yellow Dwarf Virus = 1 to 5 scale; where 1 = 95% of plants non-infected; 2.5 = ~50% of plants infected; 5 = 95+% of plants infected; Disease notes taken at the West Tennessee Experiment Station, Jackson, TN 2006.

Table 15. Mean yields† of three six-rowed barley varieties evaluated at two locations (n=4) in Tennessee for two years, 2005 - 2006.

Brand	Variety	Avg. Yield	Knoxville	Spring Hill
		± Std Err. (n=4)‡		
-----bu/a-----				
VA	Thoroughbred	103 ± 4	113	92
VA	Price	98 ± 4	110	86
VA	Doyce (Hulless)	84 ± 4	86	83
Average (bu/a)		95	103	87
L.S.D._{.05} (bu/a)		12	22	11
C.V. (%)		11.7	13.9	7.3

† All yields are adjusted to 13.5% moisture.

‡ n = number of environments

Table 16. Mean yields† and agronomic characteristics of three six-rowed barley varieties evaluated at two locations (n=4) in Tennessee for two years, 2005 - 2006.

Brand	Variety	Avg. Yield	Moisture (n=10)	Test	Maturity (n=9)	Height (n=10)	Lodging (n=5)	Barley
		± Std Err. (n=4)‡		Weight§ (n=6)				Yellow Dwarf (n=1)
		bu/a	%	lbs/bu	DAP	in.	Score	Score
VA	Thoroughbred	103 ± 4	11.4	46.2	220	33	2.2	1.7
VA	Price	98 ± 4	11.2	44.4	219	31	2.9	2.7
VA	Doyce (Hulless)	84 ± 4	12.8	53.9	219	33	3	1.5

† All yields are adjusted to 13.5% moisture.

‡ n = number of environments

§ Official test weight of No. 1 barley = 48 lbs/bu.

Maturity (DAP) = Days after planting

Lodging = 1 to 5 scale; where 1 = 95% of plants erect; 2.5 = ~50% of plants leaning at angle ≥ 45°; 5 = 95+% of plants leaning at an angle ≥ 45°.

Barley Yellow Dwarf Virus = 1 to 5 scale; where 1 = 95% of plants non-infected; 2.5 = ~50% of plants infected; 5 = 95+% of plants infected;

Disease notes taken at the West Tennessee Experiment Station, Jackson, TN 2006.

Table 17. Mean yields† of three six-rowed barley varieties evaluated at two locations (n=6) in Tennessee for three years, 2004 - 2006.

Brand	Variety	Avg. Yield	Knoxville	Spring Hill
		± Std Err. (n=6)‡		
		-----bu/a-----		
VA	Thoroughbred	112 ± 3	119	104
VA	Price	100 ± 3	116	84
VA	Doyce (Hulless)	82 ± 2	87	78
Average (bu/a)		98	107	89
L.S.D._{.05} (bu/a)		11	14	17
C.V. (%)		13.1	11.3	15.2

† All yields are adjusted to 13.5% moisture.

‡ n = number of environments

Table 18. Mean yields† and agronomic characteristics of three six-rowed barley varieties evaluated at two locations (n=6) in Tennessee for three years, 2004 - 2006.

Brand	Variety	Avg. Yield	Moisture (n=15)	Test	Heading (n=1)	Maturity (n=14)	Height (n=15)	Lodging (n=9)	Barley
		± Std Err. (n=6)‡		Weight§ (n=10)					Yellow Dwarf (n=1)
		bu/a	%	lbs/bu	DAP	DAP	in.	Score	Score
VA	Thoroughbred	112 ± 3	11.6	45.5	186	218	33	1.9	1.7
VA	Price	100 ± 3	11.4	44.4	186	218	31	2.6	2.7
VA	Doyce (Hulless)	82 ± 2	13.0	53.1	186	218	32	2.4	1.5

† All yields are adjusted to 13.5% moisture.

‡ n = number of environments

§ Official test weight of No. 1 barley = 48 lbs/bu.

Heading & Maturity (DAP) = Days after planting

Lodging = 1 to 5 scale; where 1 = 95% of plants erect; 2.5 = ~50% of plants leaning at angle ≥ 45°; 5 = 95+% of plants leaning at an angle ≥ 45°.

Barley Yellow Dwarf Virus = 1 to 5 scale; where 1 = 95% of plants non-infected; 2.5 = ~50% of plants infected; 5 = 95+% of plants infected;

Disease notes taken at the West Tennessee Experiment Station, Jackson, TN 2006.