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INTER WHEAT

6 Missouri Crop Performance

Wickendry, Wright, Tague, Tremain, Solomon

Special Report 565

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2006 MISSOURI WINTER WHEAT PERFORMANCE TESTS

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Introduction

The objective of the Missouri Winter Wheat Performance Tests is to provide wheat growers in Missouri with a reliable, unbiased, up-to-date source of information that will permit valid comparisons among improved wheat varieties. This information should help Missouri wheat growers select varieties best suited to their particular area and growing conditions. This report summarizes soft red winter wheat variety trials conducted throughout Missouri during the 2006 crop season. No hard red winter wheat tests were conducted in 2006.

Variety Testing Procedures

Locations: All entries were planted at seven Missouri locations including Portageville and Charleston in the southeastern region, Mt. Vernon and Lamar in the southwestern region, and Columbia, Novelty, and Trenton in the northern region of the state (Figure 1).



Figure 1. Test locations for Missouri winter wheat performance tests conducted during 2006.

Entries and Seed Sources: Names of entries evaluated in 2006 and their seed sources are given in Table 1. Seventy-two soft red winter wheat varieties were tested comprised of 3 public, 3 public experimental and 66 proprietary varieties. Public varieties adapted to Missouri's growing conditions or recommended by the state of origin were entered in the 2006 variety tests under the sponsorship of the Missouri Seed Improvement Association. Seed lots of named public varieties were acquired from the foundation seed organization of the originating state or from the University of Missouri Foundation Seed Organization. Numbered entries preceded by a state designation (e.g. MO 011126; GA 951395-3E25; MV5-46) were provided by the foundation seed organization or the wheat breeder of the originating state. These are experimental lines not yet available for commercial production. Public experimental lines are tested in order to gain preliminary Missouri data on varieties that may become available for commercial production in Missouri in 2007 or thereafter. Proprietary entries were submitted for testing on a fee basis by the developing company or sponsor. Condition of all seed lots (vigor, viability, seed treatment, etc.) was the responsibility of the company or organization submitting the entry for testing.

Experimental Design and Seeding Methods:

Each soft red winter wheat experiment was planted using a 9 x 8 lattice design with four replications. All test plots consisted of a 15-foot, 6-row plot with 7-inch row spacing except for the Trenton location. At Trenton, test plots consisted of a 12-foot, 7-row plot with 7-inch row spacing. All entries were seeded at approximately 1.5 million seeds per acre, roughly equivalent to seeding 1.5 to 2 bushels per acre. Actual seeding rates were calculated from the thousand-kernel weights determined for each soft red winter wheat entry and ranged from 85 to 158 pounds per acre (Table 2). Seeding rates were not adjusted for germination. Except for the Trenton location, all entries were seeded into conventional seedbeds using a Hege 90™ plot drill equipped with six conventional double-disk openers. At Trenton, entries were seeded directly into soybean stubble using a no-till plot drill equipped with Acraplant™ no-till openers.

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Cover Photo: Wheat yield trials, Delta Center Lee Farm, Portageville, MO.

Table 1. Names and sources of commercial soft red winter wheat cultivars tested in Missouri in 2006.

Variety	Source/Contact	Variety	Source/Contact
Bess [†] Roane [†] Truman [†]	Missouri Seed Improvement Assoc. 3211 Lemone Industrial Blvd. Columbia, MO 65210-8245 (573) 449-0586	EXCEL 173 EXCEL 361 EXCEL 392 TW EXCEL 399 EXCEL 410 TW	EXCEL SEED 257 E. Hail Bushnell, IL 61427 (888) 593-7707
MO 011126 [†]	University of Missouri Dept. of Agronomy Columbia, MO 65211 (573) 882-7708	EXCEL 201 EXCEL 307 EXCEL 388 EXCEL 400-1	River Bend Custom Seeds, LLC. Box 146 Carrollton, MO 51401 (660) 542-0435
GA 951395-3E25 [†]	University of Georgia Georgia Station Griffin, GA 30223 (770) 228-7321	FFR 8302	FFR Seed 969 Cloverleaf Dr. Southaven, MS 38671 (901) 652-0903
MV5-46 [†]	University of Maryland LESREC Salisbury, MD 21801 (410) 742-1178 Ext. 308	JGL Exp 604	JGL Inc. 3540 S. US 231 Greencastle, IN 46135 (765) 653-5402
AgriPro Benton AgriPro Beretta AgriPro Branson AgriPro Cooper AgriPro D01-7759	AgriPro COKER P.O. Box 729 Bay, AR 72411 (870) 483-7691	LEWIS 841 LEWIS 860	Lewis Hybrids Inc. P.O. Box 38 Ursa, IL 62376 (217) 964-2131
AGS 2000	AG South Genetics P.O. Box 72246 Albany, GA 31708 (229) 881-7455	Merschman Barbie VII Merschman Bintee VII Merschman Genie IX Merschman Katie X	Merschman Seeds, Inc. 103 Ave. D West Point, IA 52656 (800) 848-7333
Armor 260Z Armor 2010 Armor 3015 Armor 3035 Armor 3330 Armor 5110	Cullum Seed 1 Pennsylvania Dr. Waldenburg, AR (870) 579-2286	MFA 2020 MFA 2318 MFA 2320	MFA Incorporated 201 Ray Young Dr. Columbia, MO 65201 (573) 876-5363
COKER 9511 (tested in 2005 as COKER B980582) COKER 9553	AgriPro COKER P.O. Box 729 Bay, AR 72411 (870) 483-7691	MPV 14S-4 MPV 16S-2	Midwest Premium Genetics 523 S. Main Concordia, MO 64020 (660) 463-7333
Dixie 500 Dixie 900 Dixie 9512 Dixie DX989	Cache River Valley Seed 12470 Highway 226 Cash, AR 72421 (870) 477-5427	Pioneer ® Variety 25R47 Pioneer ® Variety 25R54 Pioneer ® Variety 25R63 Pioneer ® Variety 25R78	Pioneer Hi-Bred Int. Inc. 5700 Merle Hay Rd. Johnston, IA 50131-0454 (515) 253-5886
Delta Grow 1600 Delta Grow 4100 Delta Grow 4500 Delta Grow 5200	Delta Grow Seed P.O. Box 219 England, AR 72046 (501) 842-2572	Progeny 110 Progeny 133 Progeny 145 Progeny 166 Progeny 185 Progeny 196	Progeny Ag. Products 1529 Hwy. 193 Wynne, AR 72396 (888) 535-7333
Delta King 7710 Delta King 7830 Delta King 9410 Delta King 9577 Delta King GR9108	Delta King Seed Co. 522 Poplar Ave McCrary, AR 72101 (870) 731-2992	USG 3209 USG 3244 USG 3430	UniSouth Genetics, Inc. 2460-C Nolensville Rd. Nashville, TN 37211 (800) 505-3133
Dyna Gro 401 Dyna Gro 410 Dyna Gro 415 Dyna Gro 427	UAP 1267 W. Washington Pittsfield, IL 62363 (217) 243-7790		

[†] Public winter wheat cultivars and experimental entries.

Table 2. Seed size of entries, adjusted seeding rates, and seed treatments of seed lots used for establishing soft red winter wheat entries during the fall of 2005. Use of seed treatment trade names does not imply endorsement or recommended use of such seed treatments by the Missouri Agricultural Experiment Station or University Extension.

Variety	1,000- kernel weight	Seeds per pound	Adjusted seeding rate [†]	Seed treatment(s)	Variety	1,000- kernel weight	Seeds per pound	Adjusted seeding rate [†]	Seed treatment(s)
	-g-	-no/lb-	-lb/acre-			-g-	-no/lb-	-lb/acre-	
AgriPro Benton	36.1	12,576	122	Dividend Extreme	EXCEL 388	36.1	12,576	122	Dividend Extreme Reldan
AgriPro Beretta	32.6	13,926	111	Dividend Extreme	EXCEL 392 TW	39.4	11,523	133	Dividend Cruiser
AgriPro Branson	37.3	12,172	126	Dividend Extreme	EXCEL 399	33.9	13,392	115	Dividend Extreme Reldan
AgriPro Cooper	32.3	14,056	109	Dividend Extreme	EXCEL 400-1	30.8	14,740	104	Raxil Thiram
AgriPro D01-7759	31.1	14,598	105	Dividend Extreme	EXCEL 410 TW	32.2	14,099	109	Dividend Cruiser
AGS 2000	46.8	9,701	158	Raxil Dividend	FFR 8302	40.2	11,294	136	Dividend Extreme
Armor 260Z	33.9	13,392	115	None	GA 951395-3E25	38.3	11,854	129	Raxil Thiram
Armor 2010	39.9	11,378	135	None	JGL Exp. 604	31.3	14,505	106	Dividend Extreme
Armor 3015	33.8	13,432	114	None	LEWIS 841	25.6	17,734	87	Dividend Extreme Reldan
Armor 3035	36.0	12,611	122	None	LEWIS 860	38.1	11,916	129	Dividend Extreme Reldan
Armor 3330	37.0	12,270	125	None	Merschman Barbie VII	33.5	13,552	113	Raxil Thiram
Armor 5110	30.3	14,983	102	None	Merschman Bintee VII	35.4	12,825	120	Raxil Thiram
Bess	38.7	11,731	131	GaUCHO XT	Merschman Genie IX	34.0	13,353	115	Raxil Thiram
COKER 9511	34.9	13,009	118	Dividend Extreme	Merschman Katie X	40.6	11,182	137	Raxil Thiram
COKER 9553	40.9	11,100	138	Dividend Extreme	MFA 2020	36.3	12,507	123	Dividend Extreme
Delta Grow 1600	25.3	17,945	86	Vitavax Dividend	MFA 2318	37.0	12,270	125	Dividend Extreme Reldan
Delta Grow 4100	30.6	14,837	103	Vitavax Dividend	MFA 2320	38.3	11,854	129	Dividend Extreme
Delta Grow 4500	34.4	13,198	116	Vitavax	MO 011126	43.1	10,534	146	GaUCHO XT
Delta Grow 5200	27.2	16,691	92	Vitavax	MPV 14S-4	31.5	14,413	106	Dividend Extreme
Delta King 7710	30.0	15,133	102	Dividend Cruiser	MPV 16S-2	35.5	12,789	86	Reldan
Delta King 7830	36.9	12,304	125	Dividend Cruiser	MV5-46	45.5	9,978	154	Raxil Thiram
Delta King 9410	31.4	14,459	106	Dividend Cruiser	Pioneer® Variety 25R47	36.6	12,404	124	Dividend Extreme
Delta King 9577	28.3	16,042	96	Dividend Cruiser	Pioneer® Variety 25R54	36.3	12,507	123	Dividend Extreme
Delta King GR9108	35.3	12,861	119	Dividend Cruiser	Pioneer® Variety 25R63	41.5	10,940	140	Dividend Extreme
Dixie 500	36.7	12,371	124	Dividend Extreme	Pioneer® Variety 25R78	37.2	12,204	126	Dividend Extreme
Dixie 900	35.1	12,934	119	Dividend Extreme	Progeny 110	35.9	12,646	122	None
Dixie 9512	35.7	12,717	121	Dividend Extreme	Progeny 133	35.8	12,682	121	None
Dixie DX989	25.2	18,016	85	Dividend Extreme	Progeny 145	34.7	13,084	118	None
Dyna Gro 401	34.9	13,009	118	Raxil Thiram	Progeny 166	35.3	12,861	120	Dividend
Dyna Gro 410	36.3	12,507	123	Raxil Thiram Storecide	Progeny 185	31.7	14,322	107	Raxil
Dyna Gro 415	34.9	13,009	118	Raxil Thiram Storecide	Progeny 196	32.3	14,056	109	None
Dyna Gro 427	28.5	15,930	96	Raxil Thiram Storecide	Roane	32.8	13,841	111	GaUCHO XT
EXCEL 173	39.4	11,523	133	Dividend Extreme	Truman	30.9	14,693	104	GaUCHO XT
EXCEL 201	32.2	14,099	100	Dividend Extreme	USG 3209	40.7	11,155	138	GaUCHO XT
EXCEL 307	36.9	12,304	125	Dividend Extreme	USG 3244	34.4	13,198	116	GaUCHO XT
EXCEL 361	34.1	13,314	115	Dividend Extreme	USG 3430	33.6	13,512	113	GaUCHO XT

† Adjusted to 1.5 million seeds per acre according to the number of seeds per pound for each entry.

Table 3. Summary of agronomic practices used on wheat performance trials in Missouri during 2005-2006. Fall nitrogen (N), phosphorus (P₂O₅), and potassium (K₂O) were pre-plant applied and incorporated.

Location	Predominant soil type(s)	Previous crop	2005 Planting date	Fertility management					2006 Harvest date
				N			P ₂ O ₅	K ₂ O	
				Fall	Spring	Total			-----lb/acre-----
Northern									
Columbia	Mexico silt loam	soybean	October 11	40	80	120	20	60	June 28
Novelty	Putnam silt loam	soybean	October 14	40	50/30 [‡]	120	60	80	July 18
Trenton [†]	Grundy silt loam	soybean	October 13	36	39/42 [‡]	117	92	180	July 06
Southwest									
Lamar	Parsons silt loam	corn	October 6	60	27	87	69	90	June 21
Mt. Vernon	Gerald silt loam	soybean	October 7	75	75	150	25	50	June 20
Southeast									
Charleston [§]	Sharkey silty clay	corn	October 24	20	60/60 [‡]	140	120	0	June 16
Portageville	Tiptonville silt loam	soybean	October 25	40	80	120	19	19	June 13

[†] Entries were seeded directly into soybean stubble using a no-till plot drill equipped with Acraplant™ no-till openers.

[‡] Spring N applications were split applications of 50/30, 39/42, and 60/60 at Novelty, Trenton, and Charleston, respectively.

[§] Fall applications of Karate and 17 lbs of sulfur; spring applications of 2,4-D, Harmony Extra, Karate, and Headline.

Agronomic Practices:

Basic agronomic practices are given in Table 3 by location. Nitrogen was applied in split fall/spring applications. Except where indicated, spring nitrogen applications were generally made at or shortly after initial green-up (Feeke's GS 6). Pre-plant phosphorous and potassium applications were based on soil test recommendations provided by the University of Missouri's Soil Testing Laboratory located at Columbia or by a similar private soil testing facility. Planting dates were generally determined by the fly-free date for the given location. Management practices at Charleston differed from those at other locations as indicated in Table 3.

Description of Data Collected

Yield: All rows of each test plot were trimmed 30 inches, measured for length, and harvested using a Kincaid™ experimental plot combine. Recorded grain yields were adjusted to 13% grain moisture on comparable plot areas and reported in bushels per acre based on a 60 pound standard bushel weight. In addition to yields obtained in 2006, two-year averages (2005-06), and three-year averages (2004-06) are provided for those entries tested in the Missouri tests for two or three consecutive years, respectively.

Test Weight and Grain Moisture Content: Test weight (pounds per bushel) and percentage grain moisture were determined for grain from each plot using a Dickey-john GAC 2100b™ grain analyzer.

Plant Height: Plant height was measured in inches from the soil surface to the top of the head, excluding awns if present. Reported values have been rounded to the nearest inch.

Lodging: Lodging severity at crop maturity was rated at all test locations. Plots were rated on a severity scale of 0 to 9 where 0=no lodging and 9=plants in the plot were completely flat.

Winter Survival: Percent winter survival was estimated for each plot after initial spring green-up (approximately Feeke's GS 6) at all locations. Reported values have been rounded to the nearest percent.

Heading Date: Heading dates were recorded at Columbia and Portageville at the date when 50% of the heads in a plot had extended above the flag leaf collar. Heading dates were recorded in Julian days (number of days after January 1) for statistical purposes. The corresponding calendar dates are also presented.

Disease Ratings: Barley yellow dwarf virus (BYDV) was present at most locations and was rated, where disease was heaviest, as percentage of the flag leaves in the plot showing symptoms. Powdery mildew and Septoria leaf

blotch were present in the southwest. Both were rated as percentage of the plot canopy showing symptoms.

Statistical Analyses and Interpretation

Data collected on all traits measured during the 2005-2006 crop season are presented in Tables 5 through 14. Data presented for individual locations were analyzed using a lattice design. Regional, state-wide, and multi-year data result from analyses based on a randomized complete block design. If an observation was missing in one replication an adjusted average of the remaining observations (least squares mean) was used to approximate the missing observation. Mean comparisons were made using Fisher's protected least significant difference (LSD) at $P=0.05$. Coefficients of variation (CV %) were calculated from the analyses of variance of each location and across all locations.

The LSD is used to compare the performance of two specific varieties. If the mean of a variety exceeds that of another variety by more than the LSD, then the difference observed will be a true difference in 19 out of 20 instances under conditions similar to those of the test.

Table 14 ranks soft red winter wheats according to their state-wide average. Overall rank can be very misleading. Growers should be careful to make pair-wise comparisons of results from both the appropriate location or locations and the state-wide averages before selecting one wheat variety over another for production in Missouri. Variety selection should be based on yield stability in a production environment over years and locations. Where a variety has been in the test for two or three years, combined analyses of the yield data over years are presented. In choosing a variety, other characteristics such as test weight, heading date, and disease resistance should also be taken into consideration. Where disease data were not reported in a particular production environment, they can be evaluated from locations in which they were rated.

2006 Test Conditions

Weather: A dry weather pattern and above normal temperatures in October permitted timely planting of the wheat tests at all locations in the state, however, seedbeds in the southwest were dry and in need of moisture for rapid germination. Warm conditions continued through the fall and winter with temperatures in January that were 12-15 degrees above normal. It was the second warmest January since 1895 and the warmest since 1933. Precipitation was below normal in the western third of the state and in some central and east central counties. By the end of January the southwest was in severe drought. North central, northeast, south central, and southeastern counties experienced above normal precipitation. More seasonable temperatures returned in February, however, precipitation remained well below normal with deficits in portions of the southwest exceeding 19 inches. March was characterized by extreme drought in southwestern Missouri and severe storm events across the state with a record of 51 tornadoes. The month began with above normal temperature but returned to more seasonal towards the end of the month. Rainfall finally came to the southwest in the last week of April; however warm temperatures had significantly accelerated crop growth and although some drought tolerant or later varieties recovered, the yield and height of most varieties was severely impacted. Conditions at harvest were reasonably dry in the south. In northern locations, rainfall at harvest may have reduced test weights at Columbia and Novelty.

Diseases: Because of the warm dry fall and winter, barley yellow dwarf virus had a significant impact on the tests, reducing both grain yield and test weight of susceptible varieties at many locations. Ratings were taken at those locations where disease was most severe. Septoria leaf blotch was less severe in 2006 because of dry conditions, but was present at levels that were rated in both the southeast and at Columbia. Powdery mildew was also present in the southeastern locations due to spring rainfall. Neither stripe rust, nor leaf rust reduced 2006 yields.

2006 Test Results

The average state-wide yield of soft red winter wheats tested in the 2006 was 66.7 bu/acre (Table 5), up 5.4 bu/acre from the average grain yield in the 2005 tests (61.3 bu/acre) but down 5.9 bu/acre from the record state-wide yield (72.6 bu/acre) achieved in the 2003 Missouri Winter Wheat Performance Tests. Average yields across the seven test locations ranged from a low of 33.5 bu/acre at Lamar (Table 11) to a high of 85.0 bu/acre at

Portageville (Table 10). Average regional yields ranged from 35.2 bu/acre in the southwest to 73.3 bu/acre in the north, and 81.5 bu/acre in the southeast (Table 13). Low yields in the southwestern region of the state were due to extremely droughty conditions coupled with pressure from BYDV and other viruses. 'Pioneer® Variety 25R47' was the highest yielding soft red winter wheat tested, averaging 80.0 bu/acre across the state (Table 5). The Missouri experimental variety 'MO 011126', which averaged 79.5 bu/acre across the state did not differ from Pioneer® Variety 25R47. 'Bess', which averaged 74.1 bu/acre, was the top yielding public variety tested.

State-wide, the average test weight of entries evaluated was 57.7 lb/bu (Table 5), up 2.1 lb/bu from the state-wide average (55.6 lb/bu) recorded in the 2004 Missouri Winter Wheat Performance Tests. Test weights ranged from a low of 55.4 lb/bu recorded at Columbia (Table 6) to a high of 61.6 lb/bu recorded at Charleston (Table 9). High levels of barley yellow dwarf virus (BYDV) and rainfall at harvest contributed to the low test weights at the Columbia location. State-wide, 'COKER 9553' had the heaviest test weight (59.5 lb/bu) of soft red winter wheats tested (Table 5). The test weights of three other varieties were not significantly different from that of COKER 9553 including: 'Roane' (59.2 lb/bu), 'COKER 9511' (58.8 lb/bu) and 'EXCEL 361' (58.8 lb/bu).

2006 Missouri Winter Wheat Projected Crop Statistics: Based on the July 1st USDA forecast provided by the Missouri Agricultural Statistics Service, Missouri's wheat crop will be harvested from 870,000 acres, up 61% from the acres harvested in 2005 (Table 4). Total Missouri production is forecast at 46,110 million bushels, up 58% from the 2005 crop. Yields are projected to vary from well below normal in the southwestern counties where drought significantly impacted the crop to above normal in southeast and northeast counties. State-wide, the average yield is projected to be 53 bu/acre, down 1 bu/acre from 2005.

Table 4. Projected 2006 acreage, yield, and production of winter wheat in Missouri by reporting district compared with 2005 actual data. Data were provided by the Missouri Agricultural Statistics Service.

District	Acres planted		Acres harvested		Grain yield		Production	
	2005	2006 [†]	2005	2006 [†]	2005	2006 [†]	2005	2006 [†]
	----- 1,000 acres -----		----- 1,000 acres -----		----- bu/acre -----		----- 1,000 acres -----	
Northwest	32.0	64	30.1	61	49.8	51	1,500	3,081
North-central	39.0	85	35.4	81	50.6	54	1,790	4,374
Northeast	45.5	112	42.3	105	57.9	57	2,450	5,985
West-central	65.5	129	62.5	123	50.2	47	3,140	5,830
Central	56.0	114	49.4	104	50.2	51	2,480	5,302
East-central	42.5	86	39.4	76	49.5	53	1,950	4,028
Southwest	87.0	114	76.4	91	49.1	39	3,750	3,549
South-central	8.5	12	6.0	8	57.3	44	344	352
Southeast	214.0	284	198.5	221	59.2	62	11,756	13,609
State	590.0	1,000	540.0	870	54.0	53	29,160	46,110

[†] Estimates based on the July 1st USDA forecast.

Electronic Accessibility of Data

Results of the 2006 Missouri Winter Wheat Performance Tests are available on the University of Missouri's Agricultural Electronic Bulletin Board (AgEBB) web site. Complete soft red winter wheat variety test results can be found under crop performance testing at <http://agebb.missouri.edu/cropperf/>. Call (573) 882-4827 to contact AgEBB's staff concerning questions or problems related to the electronic accessibility of this data.

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Table 5. Performance of soft red winter wheats tested across seven Missouri locations during 2006.

Variety	Grain yield [†]			Test weight --lb/bu--	Winter survival %	Plant height in	Lodging [‡] 0-9	Heading date	
	2006	2005-06	2004-06					Julian	Calendar
AgriPro Benton	66.0	64.7	63.1	56.5	83	30	1	122	May 03
AgriPro Beretta	68.2	67.7	65.5	55.0	75	31	2	123	May 04
AgriPro Branson	68.1	64.5		57.1	78	31	2	119	April 30
AgriPro Cooper	72.0	67.9	64.4	57.4	80	30	1	123	May 04
AgriPro D01-7759	65.7			58.5	79	34	1	122	May 03
AGS 2000	67.5	63.4		58.2	81	33	2	120	May 01
Armor 260Z	71.5			57.3	78	31	2	120	May 01
Armor 2010	61.6	62.0	58.5	57.6	79	34	3	120	May 01
Armor 3015	62.7	61.1	60.5	57.5	79	35	2	122	May 03
Armor 3035	64.8	64.2	63.5	57.7	79	34	2	121	May 02
Armor 3330	62.8			58.0	79	34	2	123	May 04
Armor 5110	62.8			57.3	77	31	1	122	May 03
Bess	74.1	66.5	64.8	58.6	83	33	2	121	May 02
COKER 9511	67.2	65.1		58.8*	82	33	2	119	April 30
COKER 9553	71.6	70.8		59.5**	80	32	2	118	April 29
Delta Grow 1600	68.8			57.3	77	31	1	122	May 03
Delta Grow 4100	61.7	60.4		58.0	75	34	2	122	May 03
Delta Grow 4500	63.3	55.0	56.5	57.3	79	35	2	122	May 03
Delta Grow 5200	63.5	59.6		57.9	74	34	2	123	May 04
Delta King 7710	68.1	65.5	64.3	57.8	76	33	1	122	May 03
Delta King 7830	68.1	65.2	63.7	58.1	82	35	2	121	May 02
Delta King 9410	66.8	65.3	65.0	57.6	79	34	2	122	May 03
Delta King 9577	70.8	65.6		58.1	76	32	1	121	May 02
Delta King GR9108	66.4			57.2	76	35	2	122	May 03
Dixie 500	59.3			57.3	76	35	3	121	May 02
Dixie 900	64.1	61.2	62.0	57.6	75	34	2	122	May 03
Dixie 9512	63.5	60.6	61.3	57.6	79	34	2	120	May 01
Dixie DX989	71.8			57.6	78	32	1	122	May 03
Dyna Gro 401	62.7			57.7	80	34	2	120	May 01
Dyna Gro 410	62.3			57.6	77	35	2	121	May 02
Dyna Gro 415	62.9			58.0	79	35	2	120	May 01
Dyna Gro 427	62.7			57.7	78	34	2	122	May 03
EXCEL 173	69.3			57.7	80	33	2	119	April 30
EXCEL 201	64.1	60.6	61.4	58.1	76	34	2	120	May 01
EXCEL 307	64.3	62.2	62.4	57.7	78	34	2	122	May 03
EXCEL 361	62.7			58.8*	72	35	2	122	May 03
EXCEL 388	63.5	62.0		57.7	77	34	2	122	May 03
EXCEL 392 TW	62.5	60.7	60.5	57.4	75	34	2	123	May 04
EXCEL 399	62.6	62.0		57.6	78	34	2	122	May 03

EXCEL 400-1	62.6	62.1	62.3	57.4	78	35	2	121	May 02
EXCEL 410 TW	64.3			57.9	79	34	2	123	May 04
FFR 8302	68.0	65.8	65.9	58.2	81	32	1	121	May 02
GA 951395-3E25	68.6			58.5	77	29	1	120	May 01
JGL Exp. 604	60.4			56.4	78	33	2	122	May 03
LEWIS 841	70.0			57.6	72	31	2	121	May 02
LEWIS 860	61.3			57.3	77	34	3	122	May 03
Merschman Barbie VII	63.1	61.6	62.1	57.8	77	34	2	122	May 03
Merschman Bintee VII	57.4			56.9	75	34	2	123	May 04
Merschman Genie IX	62.4	60.7	62.1	57.4	77	34	2	122	May 03
Merschman Katie X	60.9			57.3	74	33	2	122	May 03
MFA 2020	63.3	62.6	61.9	57.9	78	34	2	121	May 02
MFA 2318	61.9			57.2	80	34	2	122	May 03
MFA 2320	62.9			57.4	72	34	2	122	May 03
MO 011126	79.5*			58.7	81	33	2	122	May 03
MPV 14S-4	72.5	68.2	65.3	58.2	81	33	2	122	May 03
MPV 16S-2	71.5			57.6	76	32	1	122	May 03
MV5-46	69.3	64.3		58.6	80	30	2	120	May 01
Pioneer ® Variety 25R47	80.0**	74.2**	72.2**	56.4	79	31	1	122	May 03
Pioneer ® Variety 25R54	75.4	69.9	66.5	57.1	80	32	1	121	May 02
Pioneer ® Variety 25R63	71.9			57.6	78	32	2	121	May 02
Pioneer ® Variety 25R78	75.2	69.1	65.9	58.5	81	31	2	120	May 01
Progeny 110	60.1	59.5	58.4	57.6	67	34	2	121	May 02
Progeny 133	61.6	60.2	59.2	57.6	74	34	2	121	May 02
Progeny 145	61.2	59.1	58.5	57.4	81	34	2	121	May 02
Progeny 166	60.7	60.7	60.4	57.7	77	34	2	122	May 03
Progeny 185	72.0	67.7		57.4	67	30	2	121	May 02
Progeny 196	63.1			57.2	78	29	1	123	May 04
Roane	66.4	63.6	61.4	59.2*	80	30	1	123	May 04
Truman	68.5	67.6	65.1	57.9	78	36	2	127	May 08
USG 3209	77.0	73.3*	68.8	58.3	78	29	2	120	May 01
USG 3244	68.8			57.7	76	35	2	123	May 04
USG 3430	68.0	64.9	63.9	58.0	81	35	3	119	April 30
Average	66.7	64.1	62.9	57.7	77.7	33.0	1.9	122	May 03
LSD (0.05)	2.7	2.3	1.8	0.7	3.6	0.8	0.3	0.8	
CV%	9.2	11.6	10.9	2.6	10.5	5.8	27.5	1.0	
Locations	7	14	20	7	7	7	6	3	

** Indicates the variety with the highest yield or test weight in the respective column.

* Indicates varieties that do not differ significantly in yield or test weight from the best variety based on Fisher's protected LSD ($P=0.05$).

† Yields are based on a 60 pound standard bushel weight, adjusted to 13.0 percent moisture content of the grain.

‡ Lodging rated on a 0 to 9 scale where 0 = no lodging and 9 = plants in the plot are completely flat.

Table 6. Performance of soft red winter wheats tested near Columbia, Missouri during 2006.

Variety	Grain yield [†]			Test weight	Winter survival	Plant height	Lodging [‡]	Septoria leaf blotch	BYDV	Heading date	
	2006	2005-06	2004-06							Julian	Calendar
	-----bu/acre-----			--lb/bu--	%	in	0-9	% canopy	% flag leaf		
AgriPro Benton	59.9	78.9	72.1	54.0	79	34	2	16	33	122	May 03
AgriPro Beretta	58.0	77.6	71.2	53.4	74	36	1	16	34	124	May 05
AgriPro Branson	60.0	72.7		54.9	82	35	2	13	17	118	April 29
AgriPro Cooper	60.5	78.4	71.3	54.8	71	36	1	16	19	124	May 05
AgriPro D01-7759	62.8			55.8	84	37	1	15	19	122	May 03
AGS 2000	63.2	79.1		56.4*	83	36	3	13	30	120	May 01
Armor 260Z	71.5			54.5	86	35	1	10	16	120	May 01
Armor 2010	54.0	69.5	61.4	55.2	82	39	3	21	26	120	May 01
Armor 3015	54.3			53.8	77	34	2	18	13	124	May 05
Armor 3035	58.1	72.8	67.8	54.8	77	39	3	14	20	122	May 03
Armor 3330	61.9	79.9	73.8	55.6	84	39	2	15	18	120	May 01
Armor 5110	55.7			55.6	73	39	2	12	11	123	May 04
Bess	72.3	78.8	70.3	56.8*	82	40	3	11	7	121	May 02
COKER 9511	64.0	68.8		57.0*	88	38	2	10	5	118	April 29
COKER 9553	62.7	75.4		56.7*	85	36	2	14	20	119	April 30
Delta Grow 1600	74.5			55.1	87	36	1	11	13	122	May 03
Delta Grow 4100	57.9	67.0		55.9	71	39	2	14	12	122	May 03
Delta Grow 4500	62.1	70.3	65.6	55.4	89	40	3	11	14	120	May 01
Delta Grow 5200	55.8	64.6		55.7	70	38	2	11	14	123	May 04
Delta King 7710	69.2	79.8	72.5	56.0	87	40	2	12	11	122	May 03
Delta King 7830	66.9	76.8	71.6	57.0*	85	39	2	13	11	120	May 01
Delta King 9410	70.1	78.6	74.0	55.7	84	40	2	11	11	121	May 02
Delta King 9577	81.5*	83.8		55.5	81	37	2	14	6	121	May 02
Delta King GR9108	64.1			55.8	75	37	2	13	14	122	May 03
Dixie 500	50.3			55.3	69	38	3	21	26	122	May 03
Dixie 900	56.3	70.1	69.2	55.0	76	39	2	13	15	121	May 02
Dixie 9512	53.3	66.1	65.4	55.7	83	39	2	16	25	120	May 01
Dixie DX989	74.9			55.2	84	35	2	9	15	121	May 02
Dyna Gro 401	53.6			55.1	81	38	3	19	23	120	May 01
Dyna Gro 410	52.0			54.8	76	39	2	14	20	121	May 02
Dyna Gro 415	55.3			57.4**	80	39	2	15	21	121	May 02
Dyna Gro 427	56.3			54.9	73	39	2	15	14	122	May 03
EXCEL 173	71.4			55.4	83	39	2	12	11	119	April 30
EXCEL 201	56.3	66.5	65.6	55.7	80	39	2	15	27	119	April 30
EXCEL 307	52.3	68.5	66.3	54.7	77	39	2	14	18	122	May 03
EXCEL 361	50.9			56.5*	62	38	2	13	24	123	May 04
EXCEL 388	54.7	68.9		54.3	78	40	3	14	18	122	May 03
EXCEL 392 TW	58.8	70.0	65.5	55.5	79	38	2	12	9	123	May 04
EXCEL 399	57.5	72.0		55.3	78	37	2	9	15	121	May 02

EXCEL 400-1	59.4	73.0	70.0	55.3	91	40	2	15	24	121	May 02
EXCEL 410 TW	58.5			55.6	84	39	2	17	14	122	May 03
FFR 8302	68.6	78.7	72.2	57.3*	87	37	1	9	13	122	May 03
GA 951395-3E25	69.3			57.0*	80	35	1	12	14	120	May 01
JGL Exp. 604	52.4			53.3	76	38	2	17	27	121	May 02
LEWIS 841	74.4			55.7	85	36	2	10	10	120	May 01
LEWIS 860	53.2			54.2	77	39	3	17	23	122	May 03
Merschman Barbie VII	58.9	70.3	65.2	55.5	71	39	3	15	11	122	May 03
Merschman Bintee VII	48.5			53.9	74	38	2	20	30	122	May 03
Merschman Genie IX	58.4	65.6	61.9	53.7	75	37	2	15	13	121	May 02
Merschman Katie X	49.2			55.2	75	36	2	15	29	121	May 02
MFA 2020	56.9	74.1	67.6	55.1	78	39	2	14	23	121	May 02
MFA 2318	60.8			54.7	86	39	2	11	12	122	May 03
MFA 2320	57.4			54.4	78	38	2	10	12	121	May 02
MO 011126	80.3*			56.7*	86	38	2	4	2	122	May 03
MPV 14S-4	71.2	82.1	73.2	55.9	87	37	2	14	11	122	May 03
MPV 16S-2	82.5**			55.9	81	36	2	12	7	122	May 03
MV5-46	59.1	73.7		56.0	78	34	1	14	32	120	May 01
Pioneer ® Variety 25R47	69.2	85.4	76.5	53.3	83	35	1	14	14	122	May 03
Pioneer ® Variety 25R54	71.9	80.4	74.2	55.2	84	36	2	8	6	121	May 02
Pioneer ® Variety 25R63	60.7			54.7	74	36	2	9	8	123	May 04
Pioneer ® Variety 25R78	66.6	83.6	74.0	56.7*	84	35	1	12	7	119	April 30
Progeny 110	51.6	69.2	63.9	55.7	57	39	3	22	29	120	May 01
Progeny 133	56.9	72.2	67.4	55.0	80	39	2	17	16	121	May 02
Progeny 145	53.6	67.8	62.9	55.4	80	39	3	17	27	120	May 01
Progeny 166	54.2	71.4	65.5	54.9	73	39	2	14	23	121	May 02
Progeny 185	69.4	79.9		54.9	61	34	2	14	9	121	May 02
Progeny 196	61.3			56.0	79	34	2	16	29	123	May 04
Roane	65.4	74.6	65.8	57.4**	80	36	2	11	10	124	May 05
Truman	65.4	78.1	71.3	56.3*	76	40	3	6	6	127	May 08
USG 3209	80.4*	91.4**	80.1**	56.1	86	37	2	9	6	119	April 30
USG 3244	71.3			56.2*	80	39	2	11	6	122	May 03
USG 3430	65.6	76.1	69.9	56.0	82	41	2	14	10	119	April 30
Average	61.9	74.6	69.3	55.4	79.2	37.6	2.0	13.3	16.3	121	May 02
LSD (0.05)	4.6	4.9	3.5	1.2	7.7	2.3	0.4	3.0	5.1	1.2	
CV%	6.0	8.0	7.5	1.8	7.8	5.0	0.9	19.2	26.5	0.9	

** Indicates the variety with the highest yield or test weight in the respective column.

* Indicates varieties that do not differ significantly in yield or test weight from the best variety based on Fisher's protected LSD ($P=0.05$).

† Yields are based on a 60 pound standard bushel weight, adjusted to 13.0 percent moisture content of the grain.

‡ Lodging rated on a 0 to 9 scale where 0 = no lodging and 9 = plants in the plot are completely flat.

Table 7. Performance of soft red winter wheats tested at Novelty, Missouri during 2006.

Variety	Grain yield [†]			Test weight	Winter survival	Plant height	Lodging [‡]	Heading Date	
	2006	2005-06	2004-06					Julian	Calendar
	-----bu/acre-----			--lb/bu--	%	in	0-9		
AgriPro Benton	84.3	74.0	72.4	54.0	86	36	1	131	May 12
AgriPro Beretta	83.6	73.7	73.9	54.5	80	37	2	133	May 14
AgriPro Branson	83.6	71.6		55.5	78	36	3	129	May 10
AgriPro Cooper	88.9		67.9	55.1	85	35	2	132	May 13
AgriPro D01-7759	84.3			56.9	82	40	2	131	May 12
AGS 2000	85.5	68.2		56.2	86	40	1	130	May 11
Armor 260Z	89.1			55.4	82	38	2	130	May 11
Armor 2010	80.6	74.8	69.1	55.6	86	42	3	130	May 11
Armor 3015	91.2			55.8	84	36	1	131	May 12
Armor 3035	78.0	65.4	68.0	55.6	86	41	2	132	May 13
Armor 3330	82.3	72.1	72.7	56.1	84	39	2	130	May 11
Armor 5110	84.7			56.1	81	41	2	131	May 12
Bess	86.5	76.3	76.4*	57.0	83	38	2	131	May 12
COKER 9511	76.5	63.2		56.8	79	39	2	129	May 10
COKER 9553	80.9	82.5**		58.2**	87	38	1	128	May 09
Delta Grow 1600	88.6			55.5	86	37	2	131	May 12
Delta Grow 4100	83.2	70.9		56.5	82	42	3	132	May 13
Delta Grow 4500	80.1	56.9	62.9	55.9	88	42	3	131	May 12
Delta Grow 5200	83.9	71.6		56.1	81	40	2	131	May 12
Delta King 7710	86.7	69.1	71.1	56.8	81	39	2	133	May 14
Delta King 7830	84.0	71.6	72.3	57.3*	83	42	3	129	May 10
Delta King 9410	83.4	70.0	71.5	55.8	87	40	2	131	May 12
Delta King 9577	90.3	70.4		56.7	81	37	2	131	May 12
Delta King GR9108	81.6			55.9	78	42	3	132	May 13
Dixie 500	78.2			56.1	81	42	3	130	May 11
Dixie 900	81.5	65.2	68.3	55.9	78	41	3	130	May 11
Dixie 9512	86.8	67.4	69.9	56.7	82	41	2	129	May 10
Dixie DX989	93.2*			55.0	85	38	1	131	May 12
Dyna Gro 401	82.8			55.8	85	42	2	128	May 09
Dyna Gro 410	81.5			56.4	82	41	2	130	May 11
Dyna Gro 415	78.4			56.2	85	42	2	128	May 09
Dyna Gro 427	76.9			56.5	82	42	3	131	May 12
EXCEL 173	90.9			56.2	84	37	3	129	May 10
EXCEL 201	87.9	70.7	71.5	56.7	84	40	2	129	May 10
EXCEL 307	83.0	74.0	75.8	56.6	82	40	2	131	May 12
EXCEL 361	81.6			57.8*	84	40	3	131	May 12
EXCEL 388	80.9	66.3		55.9	80	39	2	130	May 11
EXCEL 392 TW	87.1	69.4	70.9	56.6	83	39	2	132	May 13
EXCEL 399	82.5	67.1		56.1	81	42	2	131	May 12

EXCEL 400-1	78.5	71.0	72.2	55.5	80	41	2	131	May 12
EXCEL 410 TW	79.2			55.8	83	40	2	132	May 13
FFR 8302	87.3	71.7	74.2	56.8	86	38	2	131	May 12
GA 951395-3E25	86.1			56.7	79	35	2	131	May 12
JGL Exp. 604	77.2			54.8	85	39	3	131	May 12
LEWIS 841	91.8			55.9	80	35	2	131	May 12
LEWIS 860	81.2			56.4	83	41	3	132	May 13
Merschman Barbie VII	79.5	73.8	75.5	56.1	84	39	2	131	May 12
Merschman Bintee VII	71.7			55.8	85	40	2	131	May 12
Merschman Genie IX	80.3	70.7	72.9	56.7	85	41	2	130	May 11
Merschman Katie X	83.3			55.9	86	40	3	130	May 11
MFA 2020	81.2	72.2	72.1	56.4	83	40	2	130	May 11
MFA 2318	78.1			55.7	83	42	2	131	May 12
MFA 2320	83.4			55.6	81	40	2	130	May 11
MO 011126	86.7			55.5	91	39	2	132	May 13
MPV 14S-4	86.5	72.1	72.1	56.8	84	40	1	132	May 13
MPV 16S-2	94.4*			55.1	84	36	1	130	May 11
MV5-46	85.5	65.8		56.7	81	36	2	131	May 12
Pioneer ® Variety 25R47	96.9**	78.2*	80.2**	54.2	84	37	2	131	May 12
Pioneer ® Variety 25R54	85.7	77.1*	76.1*	56.1	83	38	1	132	May 13
Pioneer ® Variety 25R63	84.9			54.2	85	38	2	131	May 12
Pioneer ® Variety 25R78	96.6*	71.7	69.5	56.0	88	36	1	130	May 11
Progeny 110	80.3	72.5	71.8	56.5	76	41	2	132	May 13
Progeny 133	81.3	69.5	70.1	56.5	86	40	3	131	May 12
Progeny 145	80.3	64.6	66.7	55.7	85	42	2	129	May 10
Progeny 166	81.7	69.1	70.6	56.6	85	40	2	130	May 11
Progeny 185	92.8*	65.2		56.7	77	37	2	131	May 12
Progeny 196	83.0			56.8	82	35	1	133	May 14
Roane	88.4	76.5	75.1	58.2**	88	35	1	133	May 14
Truman	88.5	77.0*	76.6*	56.8	81	40	2	137	May 18
USG 3209	94.7*	81.0*	75.6	57.0	80	37	3	132	May 13
USG 3244	83.8			55.9	78	41	2	132	May 13
USG 3430	80.1	72.0	73.7	56.6	83	41	2	128	May 09
Average	84.2	71.0	72.1	56.1	83.1	39.2	2.1	131	May 12
LSD (0.05)	4.8	5.9	4.1	0.9	4.7	1.9	0.7	1.3	
CV%	4.6	10.1	8.5	1.4	4.5	4.0	25.9	0.8	

** Indicates the variety with the highest yield or test weight in the respective column.

* Indicates varieties that do not differ significantly in yield or test weight from the best variety based on Fisher's protected LSD ($P=0.05$).

† Yields are based on a 60 pound standard bushel weight, adjusted to 13.0 percent moisture content of the grain.

‡ Lodging rated on a 0 to 9 scale where 0 = no lodging and 9 = plants in the plot are completely flat.

Table 8. Performance of soft red winter wheats tested at Trenton, Missouri during 2006.

Variety	Grain yield ^{†‡}		Test weight --lb/bu--	Winter survival %	Plant height in	Lodging [§] 0-9
	2006	2005-06				
	-----bu/acre-----					
AgriPro Benton	76.6	68.7	56.7	74	34	1
AgriPro Beretta	74.5	65.8	56.5	74	34	2
AgriPro Branson	75.8	67.0	57.1	78	35	2
AgriPro Cooper	84.2**	75.4*	57.5	77	35	1
AgriPro D01-7759	77.1		57.6	67	38	1
AGS 2000	70.5	57.4	58.2	71	36	2
Armor 260Z	83.2*		57.7	76	37	1
Armor 2010	67.6	59.3	57.2	82	41	2
Armor 3015	75.8		57.6	70	36	1
Armor 3035	77.1	68.4	57.2	78	40	2
Armor 3330	71.6	63.8	57.1	79	39	2
Armor 5110	72.0		57.1	81	38	2
Bess	77.6	64.8	58.8	86	39	1
COKER 9511	69.1	66.3	58.5	80	37	2
COKER 9553	69.9	68.2	59.7**	78	38	1
Delta Grow 1600	80.6*		56.8	72	36	1
Delta Grow 4100	70.7	64.1	57.0	64	39	2
Delta Grow 4500	69.4	57.3	57.3	71	40	2
Delta Grow 5200	71.0	61.3	57.1	76	40	2
Delta King 7710	74.3	72.0	57.6	73	37	1
Delta King 7830	70.9	62.3	57.4	83	40	3
Delta King 9410	73.2	66.8	56.8	80	40	2
Delta King 9577	80.4*	67.5	58.4	75	38	1
Delta King GR9108	64.5		57.5	70	40	2
Dixie 500	72.3		57.5	86	40	3
Dixie 900	72.6	66.5	57.1	75	39	2
Dixie 9512	71.9	63.1	57.0	78	38	2
Dixie DX989	78.6*		57.2	70	37	1
Dyna Gro 401	71.9		57.5	79	39	2
Dyna Gro 410	74.8		57.6	71	40	2
Dyna Gro 415	72.3		57.3	76	40	1
Dyna Gro 427	70.2		56.9	75	40	2
EXCEL 173	76.2		58.0	82	39	2
EXCEL 201	81.8*	66.7	59.0*	85	41	2
EXCEL 307	73.3	64.6	57.1	82	39	2
EXCEL 361	69.4		59.0*	66	41	3
EXCEL 388	71.5	61.8	57.2	76	40	2
EXCEL 392 TW	75.6	68.4	57.5	73	39	2
EXCEL 399	71.3	65.2	56.7	81	40	2

EXCEL 400-1	72.3	66.5	57.1	64	39	2
EXCEL 410 TW	73.0		57.3	82	38	2
FFR 8302	76.9	61.8	58.5	74	36	1
GA 951395-3E25	71.8		59.3*	65	34	1
JGL Exp. 604	81.7*		57.7	81	39	2
LEWIS 841	73.8		56.9	79	36	1
LEWIS 860	70.1		56.9	83	38	2
Merschman Barbie VII	73.0	61.8	57.4	82	39	2
Merschman Bintee VII	64.7		57.4	62	38	2
Merschman Genie IX	73.8	65.4	57.2	78	40	2
Merschman Katie X	69.4		56.9	76	40	2
MFA 2020	73.2	63.2	57.2	72	37	2
MFA 2318	68.3		56.4	76	40	2
MFA 2320	73.6		57.6	75	39	2
MO 011126	73.2		58.0	71	37	2
MPV 14S-4	70.8	69.1	57.6	63	37	1
MPV 16S-2	80.9*		56.9	72	38	2
MV5-46	73.5	60.6	58.8	80	34	2
Pioneer ® Variety 25R47	83.3*	76.7**	56.1	64	34	1
Pioneer ® Variety 25R54	75.9	67.1	56.9	77	37	1
Pioneer ® Variety 25R63	77.0		56.9	77	37	1
Pioneer ® Variety 25R78	78.7*	69.4	58.3	83	35	1
Progeny 110	68.2	60.6	57.3	65	40	2
Progeny 133	70.1	63.0	56.8	73	39	2
Progeny 145	72.9	60.3	56.8	83	39	2
Progeny 166	67.7	62.2	57.0	75	39	2
Progeny 185	73.7	68.9	57.2	60	34	2
Progeny 196	70.7		58.4	59	32	1
Roane	71.9	64.9	58.9	79	33	1
Truman	75.4	71.3	58.1	75	38	1
USG 3209	79.4*	71.5	58.1	78	35	2
USG 3244	70.6		56.8	73	41	2
USG 3430	72.8	62.4	57.2	84	40	3
Average	73.7	65.4	57.4	74.6	37.8	1.8
LSD (0.05)	6.0	4.6	0.7	12.2	1.6	0.4
CV%	7.0	8.5	1.0	14.0	3.6	20.5

** Indicates the variety with the highest yield or test weight in the respective column.

* Indicates varieties that do not differ significantly in yield or test weight from the best variety based on Fisher's protected LSD ($P=0.05$).

† Yields are based on a 60 pound standard bushel weight, adjusted to 13.0 percent moisture content of the grain.

‡ The 2004 test at Trenton was lost due to hail associated with tornadoes; therefore, there are no 3-year data from this location.

§ Lodging rated on a 0 to 9 scale where 0 = no lodging and 9 = plants in the plot are completely flat.

Table 9. Performance of soft red winter wheats tested at Charleston[†], Missouri during 2006.

Variety	Grain yield [†]			Test weight --lb/bu--	Winter survival %	Plant height in	Septoria leaf blight ----- % canopy -----	Powdery mildew
	2006	2005-06	2004-06					
	-----bu/acre-----							
AgriPro Benton	80.5	78.2	74.9	61.7	75	31	21	0
AgriPro Beretta	88.7*	89.9**	86.3**	61.4	68	31	9	0
AgriPro Branson	83.6	80.8		61.7	69	30	9	0
AgriPro Cooper	90.9**	88.3*	86.0*	62.0	82	30	9	1
AgriPro D01-7759	67.6			61.7	74	34	12	0
AGS 2000	74.9	70.8		60.5	77	32	13	0
Armor 260Z	81.6			59.3	70	29	8	0
Armor 2010	74.0	74.3	72.1	61.8	75	34	13	16
Armor 3015	74.9			61.8	73	31	8	0
Armor 3035	76.8	79.3	77.7	61.7	73	35	10	9
Armor 3330	78.3	77.8	76.4	61.1	73	33	10	10
Armor 5110	73.7			61.6	70	36	9	8
Bess	76.8	71.8	70.7	62.7*	72	32	6	0
COKER 9511	84.2*	82.2*		63.0**	73	33	8	0
COKER 9553	82.1	82.5*		62.5*	76	31	6	0
Delta Grow 1600	82.3			61.7	70	31	8	0
Delta Grow 4100	75.4	73.5		61.7	66	34	10	13
Delta Grow 4500	75.8	65.1	70.6	61.6	66	35	11	6
Delta Grow 5200	78.9	71.4		61.6	78	35	9	19
Delta King 7710	72.3	72.9	72.6	61.9	71	34	8	3
Delta King 7830	76.9	75.0	72.4	61.9	77	35	13	28
Delta King 9410	72.7	75.9	77.0	61.2	73	36	8	15
Delta King 9577	80.4	78.9		60.1	68	30	8	0
Delta King GR9108	78.6			61.5	68	36	6	0
Dixie 500	67.5			61.1	65	35	7	0
Dixie 900	79.6	72.4	73.7	61.9	68	34	9	16
Dixie 9512	72.4	74.4	76.5	61.8	69	33	10	23
Dixie DX989	79.1			61.1	65	32	8	0
Dyna Gro 401	75.6			61.9	82	33	9	11
Dyna Gro 410	75.4			61.6	71	35	9	13
Dyna Gro 415	82.2			61.1	83	36	10	11
Dyna Gro 427	77.1			60.9	71	35	14	12
EXCEL 173	79.3			60.8	68	31	10	0
EXCEL 201	77.5	69.2	71.4	61.4	71	34	21	1
EXCEL 307	77.9	74.9	74.3	61.4	68	35	8	8
EXCEL 361	64.5			62.2	60	34	11	14
EXCEL 388	74.3	73.3		61.8	73	35	13	13
EXCEL 392 TW	74.4	71.5	70.6	61.5	59	36	5	0
EXCEL 399	78.4	78.9		61.4	77	36	13	15

EXCEL 400-1	81.3	75.4	75.6	61.7	79	34	13	16
EXCEL 410 TW	78.9			62.0	77	36	11	16
FFR 8302	76.8	78.8	81.3*	62.5*	74	31	10	0
GA 951395-3E25	81.0			61.6	77	28	6	0
JGL Exp. 604	84.6*			60.9	80	33	8	1
LEWIS 841	78.0			60.0	66	31	6	0
LEWIS 860	78.3			61.2	75	34	6	0
Merschman Barbie VII	77.1	76.5	78.1	61.9	72	36	10	4
Merschman Bintee VII	83.9			61.7	69	36	8	0
Merschman Genie IX	72.2	74.3	75.2	61.8	67	34	7	13
Merschman Katie X	74.2			61.2	69	34	6	0
MFA 2020	70.5	75.3	74.7	61.8	71	35	13	14
MFA 2318	76.2			62.4*	72	35	12	10
MFA 2320	80.0			61.6	63	35	10	15
MO 011126	89.2*			63.0**	77	33	7	1
MPV 14S-4	75.1	74.3	73.9	61.6	77	35	6	4
MPV 16S-2	77.0			61.6	73	31	6	0
MV5-46	75.7	77.9		62.1	80	29	7	0
Pioneer ® Variety 25R47	85.6*	85.6*	83.8*	62.6*	69	30	7	0
Pioneer ® Variety 25R54	80.7	78.8	78.9	60.7	77	31	6	0
Pioneer ® Variety 25R63	82.4			61.4	68	31	6	0
Pioneer ® Variety 25R78	84.2*	74.2	75.8	62.4*	69	28	7	0
Progeny 110	68.2	72.7	72.4	61.6	58	32	8	12
Progeny 133	74.8	72.8	72.0	61.6	71	35	13	10
Progeny 145	76.7	74.9	75.3	61.5	77	34	19	6
Progeny 166	73.2	74.1	74.4	61.4	68	37	9	9
Progeny 185	75.4	76.9		60.8	52	29	7	0
Progeny 196	86.8*			61.2	80	29	13	1
Roane	76.7	74.5	72.0	62.6*	73	31	7	0
Truman	81.2	82.4*	76.9	61.3	72	38	5	0
USG 3209	82.6	80.0	75.9	60.5	74	27	8	0
USG 3244	79.8			61.4	78	35	12	17
USG 3430	77.0	75.7	76.0	61.3	80	35	9	15
Average	78.0	76.3	75.6	61.6	71.9	33.1	9.3	5.9
LSD (0.05)	6.9	8.1	6.0	0.7	9.7	1.7	3.2	4.8
CV%	7.1	12.9	11.8	0.9	10.8	4.3	29.0	69.6

** Indicates the variety with the highest yield or test weight in the respective column.

* Indicates varieties that do not differ significantly in yield or test weight from the best variety based on Fisher's protected LSD ($P=0.05$).

† Management practices included: fall applications of Karate and 17 lbs of sulfur; spring applications of 2,4-D, Harmony Extra, Karate, and Headline.

‡ Yields are based on a 60 pound standard bushel weight, adjusted to 13.0 percent moisture content of the grain.

Table 10. Performance of soft red winter wheats tested at Portageville, Missouri during 2006.

Variety	Grain yield [†]			Test weight --lb/bu--	Winter survival %	Plant height in	Lodging [‡] 0-9	Powdery mildew ---- % canopy ----	Septoria leaf blotch	BYDV % flag leaf	Heading date	
	2006	2005-06	2004-06								Julian	Calendar
AgriPro Benton	88.5	62.6	57.3	59.5	92	29	2	3	8	6	114	April 25
AgriPro Beretta	93.5	65.7	57.9	58.5	72	30	3	0	8	1	115	April 26
AgriPro Branson	93.2	68.9*		58.9	76	31	3	1	9	2	109	April 20
AgriPro Cooper	98.4*	71.9*	61.4*	58.9	95	31	1	3	8	6	113	April 24
AgriPro D01-7759	83.1			59.6	79	32	2	2	12	3	113	April 24
AGS 2000	87.3	69.4*		59.2	91	32	3	1	15	10	110	April 21
Armor 260Z	93.6			58.6	78	30	2	0	9	2	111	April 22
Armor 2010	81.6	57.2	52.2	59.6	71	31	4	24	23	2	111	April 22
Armor 3015	84.6			60.0	79	30	1	0	10	2	111	April 22
Armor 3035	79.6	59.5	52.9	59.1	86	34	3	6	13	11	113	April 24
Armor 3330	86.1	64.4	56.6	59.2	77	35	3	11	15	6	112	April 23
Armor 5110	82.6			59.3	84	32	3	7	12	1	115	April 26
Bess	86.1	62.6	57.0	59.7	71	31	2	0	8	2	112	April 23
COKER 9511	91.7	68.1		61.7**	89	32	3	3	9	3	109	April 20
COKER 9553	89.6	70.3*		61.5*	87	29	3	0	9	8	108	April 19
Delta Grow 1600	89.6			58.1	81	32	1	0	7	8	113	April 24
Delta Grow 4100	78.5	59.6		58.9	78	33	3	17	10	9	114	April 25
Delta Grow 4500	83.9	51.8	49.0	57.9	82	33	3	16	18	2	114	April 25
Delta Grow 5200	83.3	61.0		58.8	76	34	3	13	14	3	113	April 24
Delta King 7710	85.7	55.8	52.0	59.3	69	32	1	0	8	5	113	April 24
Delta King 7830	77.6	63.0	58.0	57.6	73	34	3	13	13	1	113	April 24
Delta King 9410	83.1	61.4	56.1	58.9	82	34	3	8	13	3	114	April 25
Delta King 9577	86.5	60.0		59.4	78	32	2	0	14	4	112	April 23
Delta King GR9108	87.5			58.1	79	34	2	0	7	1	111	April 22
Dixie 500	80.1			58.5	76	34	3	0	13	7	113	April 24
Dixie 900	77.9	59.2	55.6	58.7	76	33	3	21	14	2	114	April 25
Dixie 9512	81.7	60.4	55.2	58.3	82	33	3	13	20	5	111	April 22
Dixie DX989	89.1			58.8	75	32	2	0	9	2	113	April 24
Dyna Gro 401	80.8			59.0	76	33	3	12	17	4	112	April 23
Dyna Gro 410	80.3			58.7	81	35	3	17	15	3	113	April 24
Dyna Gro 415	81.1			59.3	75	33	3	14	19	10	113	April 24
Dyna Gro 427	81.0			58.2	77	32	3	12	14	4	114	April 25
EXCEL 173	84.8			59.2	77	31	4	5	12	2	109	April 20
EXCEL 201	83.5	64.1	57.8	58.4	80	33	3	13	13	5	112	April 23
EXCEL 307	79.8	55.6	51.2	59.1	81	33	2	17	11	5	113	April 24
EXCEL 361	77.2			60.3	73	31	3	10	13	5	114	April 25
EXCEL 388	79.3	60.6		58.9	80	33	3	20	15	4	113	April 24
EXCEL 392 TW	92.7	68.2	61.7*	59.7	83	34	3	2	6	1	115	April 26
EXCEL 399	81.0	62.5		59.0	78	34	3	11	11	7	114	April 25

EXCEL 400-1	81.3	64.5	58.3	58.6	81	34	3	8	18	5	113	April 24
EXCEL 410 TW	81.8			58.7	81	34	3	13	14	3	114	April 25
FFR 8302	94.2	74.3**	65.2**	59.7	85	32	2	3	14	10	111	April 22
GA 951395-3E25	91.5			59.9	79	29	1	4	9	4	109	April 20
JGL Exp. 604	83.4			57.6	91	33	3	7	13	9	113	April 24
LEWIS 841	89.0			58.3	73	30	1	0	9	4	113	April 24
LEWIS 860	80.2			59.1	80	34	3	3	13	8	113	April 24
Merschman Barbie VII	80.1	56.0	52.4	58.4	72	33	3	19	16	0	114	April 25
Merschman Bintee VII	78.4 [†]			57.3	73	34	3	9	10	4	115	April 26
Merschman Genie IX	81.9	62.5	56.2	58.2	73	35	3	17	13	7	114	April 25
Merschman Katie X	80.4			58.6	73	32	3	0	12	3	112	April 23
MFA 2020	79.5	57.8	53.9	59.4	75	34	3	16	12	4	114	April 25
MFA 2318	84.0			58.2	78	32	4	17	14	2	114	April 25
MFA 2320	78.4			58.8	77	33	3	20	13	7	113	April 24
MO 011126	99.8**			61.3*	89	33	3	0	7	1	112	April 23
MPV 14S-4	85.2	60.9	53.6	59.3	77	34	2	0	11	3	113	April 24
MPV 16S-2	91.3			59.3	80	32	2	3	11	1	113	April 24
MV5-46	83.3	61.8		59.8	87	28	2	1	10	3	109	April 20
Pioneer ® Variety 25R47	98.9*	69.5*	64.2*	57.5	89	30	1	0	7	3	112	April 23
Pioneer ® Variety 25R54	94.9*	72.9*	64.7*	58.8	84	31	1	0	7	2	110	April 21
Pioneer ® Variety 25R63	94.2			60.1	86	31	2	1	10	3	109	April 20
Pioneer ® Variety 25R78	91.3	68.5*	60.3	60.7*	83	31	2	2	9	2	110	April 21
Progeny 110	74.6	59.2	51.1	59.1	60	32	3	9	13	2	112	April 23
Progeny 133	77.9	60.6	53.3	59.0	62	34	3	21	15	5	113	April 24
Progeny 145	74.9	52.1	48.8	58.7	72	32	3	26	18	3	112	April 23
Progeny 166	84.4	59.7	54.6	58.7	77	34	3	18	12	6	114	April 25
Progeny 185	87.6	64.8		57.9	65	30	2	0	7	3	112	April 23
Progeny 196	82.6			58.3	77	29	3	7	19	2	114	April 25
Roane	86.3	62.4	57.5	60.1	86	29	1	4	10	1	114	April 25
Truman	84.1	63.5	58.4	58.6	75	37	1	3	6	2	118	April 29
USG 3209	91.7	71.4*	62.3*	58.2	69	25	3	0	9	1	110	April 21
USG 3244	82.3			58.7	65	32	3	17	11	1	114	April 25
USG 3430	82.7	61.3	55.6	59.2	75	32	3	19	18	2	111	April 22
Average	85.0	62.9	56.4	59.0	78.4	32.1	2.5	7.6	12.1	3.9	113	April 24
LSD (0.05)	5.5	5.9	4.4	1.2	9.2	2.1	0.7	6.6	4.7	4.2	1.4	
CV%	5.3	11.3	11.6	1.7	9.4	5.4	23.5	71.3	33.1	93.2	1.0	

** Indicates the variety with the highest yield or test weight in the respective column.

* Indicates varieties that do not differ significantly in yield or test weight from the best variety based on Fisher's protected LSD ($P=0.05$).

† Yields are based on a 60 pound standard bushel weight, adjusted to 13.0 percent moisture content of the grain.

‡ Lodging rated on a 0 to 9 scale where 0 = no lodging and 9 = plants in the plot are completely flat.

Table 11. Performance of soft red winter wheats tested at Lamar, Missouri during 2006.

Variety	Grain yield ¹			Test weight --lb/bu--	Winter survival %	Plant height in	Lodging ² 0-9	BYDV % flag leaf
	2006	2005-06	2004-06					
	-----bu/acre-----							
AgriPro Benton	39.0	53.0	53.8	55.0	76	27	1	15
AgriPro Beretta	28.9	51.4	52.2	55.5	74	27	2	4
AgriPro Branson	40.0	53.4		55.6	71	28	2	11
AgriPro Cooper	31.5	47.5	46.4	55.6	77	27	1	12
AgriPro D01-7759	38.6			59.3**	78	32	2	9
AGS 2000	45.1	55.1		57.4*	78	29	2	11
Armor 260Z	27.9			57.3*	78	27	1	2
Armor 2010	24.9	51.5	51.4	56.6	78	29	2	18
Armor 3015	16.6			54.2	75	27	1	5
Armor 3035	27.9	48.4	49.9	56.9	78	31	1	10
Armor 3330	26.3	50.5	54.4	57.1	77	30	1	18
Armor 5110	24.5			57.9*	74	30	2	2
Bess	59.9	63.2*	62.0*	57.1	78	30	2	1
COKER 9511	39.2	54.6		57.2	77	29	2	2
COKER 9553	53.2	59.1		58.6*	81	28	2	8
Delta Grow 1600	23.2			56.5	73	28	2	9
Delta Grow 4100	18.3	45.0		57.9*	77	31	1	8
Delta Grow 4500	25.8	41.0	44.7	56.0	74	30	2	11
Delta Grow 5200	24.6	43.8		57.0	70	30	2	6
Delta King 7710	46.0	60.7	59.5*	55.9	75	30	2	5
Delta King 7830	42.5	60.7	57.2	56.9	77	31	2	9
Delta King 9410	34.9	57.0	57.9	56.8	77	30	2	11
Delta King 9577	27.7	41.4		57.5*	80	28	1	5
Delta King GR9108	42.1			55.9	78	30	2	6
Dixie 500	27.5			56.5	75	31	2	5
Dixie 900	32.8	52.7	52.3	57.0	79	31	1	6
Dixie 9512	29.4	50.5	50.8	55.7	77	30	2	17
Dixie DX989	22.9			57.6*	70	28	1	6
Dyna Gro 401	28.9			56.5	74	29	2	22
Dyna Gro 410	28.5			56.5	75	31	2	8
Dyna Gro 415	36.4			56.8	74	31	1	13
Dyna Gro 427	26.1			57.7*	75	30	2	5
EXCEL 173	42.6			57.2	77	29	2	11
EXCEL 201	26.8	44.2	48.9	57.4*	74	30	1	14
EXCEL 307	33.0	54.2	55.6	57.1	79	31	2	7
EXCEL 361	46.2			57.6*	71	31	2	6
EXCEL 388	30.4	56.1		57.3*	72	30	2	7
EXCEL 392 TW	17.0	35.9	41.5	53.6	74	29	1	2
EXCEL 399	24.7	47.1		55.9	71	30	2	9

EXCEL 400-1	30.8	50.0	51.7	56.4	77	31	2	12
EXCEL 410 TW	26.1			56.7	77	29	1	10
FFR 8302	30.8	50.9	55.2	55.8	79	27	1	12
GA 951395-3E25	28.6			57.5*	76	24	2	9
JGL Exp. 604	16.9			54.5	75	29	2	3
LEWIS 841	31.2			57.7*	77	27	2	5
LEWIS 860	27.9			56.5	74	30	2	8
Merschman Barbie VII	24.4	48.0	51.7	57.1	74	30	2	5
Merschman Bintee VII	16.2			55.8	77	30	1	6
Merschman Genie IX	25.1	45.7	47.1	56.5	74	31	1	11
Merschman Katie X	25.9			56.3	76	31	2	10
MFA 2020	29.2	48.0	49.7	57.4*	75	30	1	8
MFA 2318	20.0			55.3	73	30	2	10
MFA 2320	32.2			57.0	73	30	2	10
MO 011126	68.4**			57.6*	83	30	2	0
MPV 14S-4	56.9	68.3**	63.5**	57.2	82	30	1	5
MPV 16S-2	34.4			56.8	81	28	1	3
MV5-46	45.0	58.6		57.4*	79	27	2	12
Pioneer ® Variety 25R47	50.2	64.4*	63.4*	56.0	77	27	1	7
Pioneer ® Variety 25R54	59.1	61.9*	54.9	54.4	79	28	2	9
Pioneer ® Variety 25R63	50.2			56.3	81	28	2	4
Pioneer ® Variety 25R78	48.4	63.0*	59.3*	57.1	83	28	2	5
Progeny 110	22.2	43.4	46.8	56.0	73	29	1	16
Progeny 133	27.0	47.2	49.1	56.7	71	30	1	14
Progeny 145	27.1	54.7	53.0	57.0	77	29	2	19
Progeny 166	20.7	49.9	50.2	57.4*	76	30	2	15
Progeny 185	51.2	38.8		56.5	69	28	2	5
Progeny 196	37.4			56.5	82	24	1	16
Roane	23.8	38.8	43.5	57.3*	74	25	1	3
Truman	42.7	59.7	57.7	56.3	78	34	1	1
USG 3209	52.1	57.6	57.8	57.7*	80	25	2	3
USG 3244	30.7			56.8	76	31	1	2
USG 3430	36.4	58.9	56.8	57.6*	79	31	2	7
Average	33.5	52.4	53.0	56.7	76.2	29.1	1.6	8.4
LSD (0.05)	8.4	7.5	5.4	2.0	4.6	1.6	0.6	4.9
CV%	20.1	17.4	15.2	3.1	4.8	4.5	33.8	47.6

** Indicates the variety with the highest yield or test weight in the respective column.

* Indicates varieties that do not differ significantly in yield or test weight from the best variety based on Fisher's protected LSD ($P=0.05$).

† Yields are based on a 60 pound standard bushel weight, adjusted to 13.0 percent moisture content of the grain.

‡ Lodging rated on a 0 to 9 scale where 0 = no lodging and 9 = plants in the plot are completely flat.

Table 12. Performance of soft red winter wheats tested at Mt. Vernon, Missouri during 2006.

Variety	Grain yield [†]			Test weight	Winter survival	Plant height	Lodging [‡]	BYDV
	2006	2005-06	2004-06					
	-----bu/acre-----			--lb/bu--	%	in	0-9	% flag leaf
AgriPro Benton	29.7	37.4	44.6	54.7	83	19	0	25
AgriPro Beretta	38.4	49.5	51.0	57.6	84	20	0	11
AgriPro Branson	30.0	36.7		56.4	81	20	2	11
AgriPro Cooper	38.0	46.0	45.7	58.1	79	21	1	11
AgriPro D01-7759	40.2			58.9*	82	24	1	4
AGS 2000	38.5	43.9		59.1*	84	25	1	22
Armor 260Z	40.0			58.6	72	21	1	7
Armor 2010	33.9	47.2	44.4	57.3	79	22	2	26
Armor 3015	31.9			57.4	85	21	1	13
Armor 3035	30.9	33.8	41.6	57.8	82	22	1	14
Armor 3330	34.0	40.6	47.0	58.0	79	23	2	18
Armor 5110	36.8			58.7	84	23	2	6
Bess	41.9	48.1	52.4	58.5	84	22	2	3
COKER 9511	40.4	52.7		57.7	87	21	2	4
COKER 9553	42.7	58.0*		59.4*	71	23	2	10
Delta Grow 1600	44.1			57.5	82	23	1	7
Delta Grow 4100	36.0	43.0		58.1	83	22	2	10
Delta Grow 4500	34.1	42.3	45.8	57.3	84	23	2	16
Delta Grow 5200	36.0	43.6		58.7	79	23	1	9
Delta King 7710	36.5	48.2	52.7	57.3	77	23	1	10
Delta King 7830	39.8	47.3	51.7	58.3	87	24	2	4
Delta King 9410	38.3	47.1	52.5	58.2	83	23	2	5
Delta King 9577	44.3	57.4*		58.6	77	20	1	5
Delta King GR9108	39.4			56.4	84	24	3	6
Dixie 500	31.7			56.3	75	22	2	13
Dixie 900	36.3	42.3	49.7	57.8	82	23	1	6
Dixie 9512	33.5	41.9	48.6	57.2	88	23	2	21
Dixie DX989	44.6			58.2	84	21	1	6
Dyna Gro 401	33.5			58.3	81	24	2	13
Dyna Gro 410	33.7			57.7	80	23	2	9
Dyna Gro 415	31.3			57.9	77	23	2	18
Dyna Gro 427	36.6			58.6	81	21	2	23
EXCEL 173	43.8			57.3	84	24	2	15
EXCEL 201	37.2	42.9	49.4	58.1	72	23	2	10
EXCEL 307	33.6	43.4	49.8	57.6	85	22	1	13
EXCEL 361	36.7			58.2	80	24	2	10
EXCEL 388	36.8	46.7		58.4	82	23	2	5
EXCEL 392 TW	30.7	41.7	47.6	57.3	73	23	2	1
EXCEL 399	37.3	40.8		58.4	81	23	2	9

EXCEL 400-1	30.9	34.3	43.1	57.4	82	23	2	20
EXCEL 410 TW	37.9			59.2*	79	22	2	5
FFR 8302	31.3	44.3	50.0	57.5	80	22	0	11
GA 951395-3E25	33.6			57.4	83	18	0	13
JGL Exp. 604	29.4			56.3	73	23	2	12
LEWIS 841	37.2			58.4	68	21	1	11
LEWIS 860	33.3			56.7	78	22	3	14
Merschman Barbie VII	34.9	44.7	49.7	58.4	83	21	2	6
Merschman Bintee VII	30.7			56.5	84	23	2	22
Merschman Genie IX	34.7	40.7	46.7	57.5	87	23	2	10
Merschman Katie X	32.5			56.5	72	23	2	20
MFA 2020	33.2	47.6	52.3	57.8	84	22	2	11
MFA 2318	34.1			58.0	82	22	2	13
MFA 2320	36.2			57.2	66	23	2	7
MO 011126	46.3*			59.3*	84	23	1	2
MPV 14S-4	45.7	50.9	52.9	58.4	88	24	2	5
MPV 16S-2	45.2			58.2	82	22	1	3
MV5-46	43.0	51.9		59.1*	82	22	2	9
Pioneer ® Variety 25R47	50.6**	59.9*	62.3**	56.7	81	22	1	6
Pioneer ® Variety 25R54	44.3	51.0	50.1	57.3	83	21	1	7
Pioneer ® Variety 25R63	45.2			58.9*	83	22	1	6
Pioneer ® Variety 25R78	48.0*	53.4	54.3	58.7	84	23	2	3
Progeny 110	29.3	38.8	43.0	57.1	70	23	2	17
Progeny 133	32.1	36.1	41.0	57.7	72	22	2	12
Progeny 145	34.3	39.1	43.2	57.0	88	23	2	19
Progeny 166	35.9	38.4	45.9	57.9	81	21	2	13
Progeny 185	45.2	58.3*		57.6	76	21	2	7
Progeny 196	18.4			54.1	86	16	0	13
Roane	41.0	53.6	52.4	59.6*	83	21	1	0
Truman	29.0	41.5	45.3	57.6	76	26	1	2
USG 3209	41.6	60.1**	59.3*	59.8**	75	21	2	6
USG 3244	41.6			58.0	85	23	2	4
USG 3430	39.0	47.8	52.5	58.1	79	23	2	6
Average	36.9	45.8	49.0	57.8	80.4	22.2	1.5	10.3
LSD (0.05)	4.8	5.0	4.3	1.0	6.9	1.6	0.6	8.6
CV%	10.6	13.2	13.1	1.5	7.4	5.9	28.3	7.0

** Indicates the variety with the highest yield or test weight in the respective column.

* Indicates varieties that do not differ significantly in yield or test weight from the best variety based on Fisher's protected LSD ($P=0.05$).

† Yields are based on a 60 pound standard bushel weight, adjusted to 13.0 percent moisture content of the grain.

‡ Lodging rated on a 0 to 9 scale where 0 = no lodging and 9 = plants in the plot are completely flat.

Table 13. Grain yields[†] of soft red winter wheats tested across the northern (Columbia, Novelty, and Trenton), southeastern (Charleston and Portageville), and southwestern (Lamar and Mt. Vernon) regions of Missouri during 2006.

Variety	Northern region [†]			Southeastern region			Southwestern region			State average
	2006	2005-06	2004-06	2006	2005-06	2004-06	2006	2005-06	2004-06	2006
	-----bu/acre-----									
AgriPro Benton	73.1	73.9	71.3	84.3	70.4	66.1	32.8	45.2	49.2	66.0
AgriPro Beretta	74.5	72.4	70.8	89.1	77.8*	72.1*	33.1	50.4	51.6	68.2
AgriPro Branson	73.8	70.4		88.6	74.8		34.8	45.1		68.1
AgriPro Cooper	78.8	73.8	71.0	96.2**	80.1**	73.7*	34.6	46.7	46.1	72.0
AgriPro D01-7759	73.8			76.3			38.5			65.7
AGS 2000	74.5	68.2		80.5	70.1		39.7	49.5		67.5
Armor 260Z	81.8			86.0			34.1			71.5
Armor 2010	67.7	67.9	63.8	77.7	65.7	62.2	29.6	49.4	47.9	61.6
Armor 3015	73.0			79.7			25.6			62.8
Armor 3035	71.2	68.9	68.0	75.1	69.4	65.3	31.7	41.1	45.8	62.7
Armor 3330	71.1	72.0	70.9	80.1	71.1	66.5	31.8	45.5	50.7	64.8
Armor 5110	68.8			79.8			31.3			62.8
Bess	80.0	73.3	71.2	83.3	67.2	63.8	49.3	55.7	57.2	74.1
COKER 9511	68.6	66.1		87.6	75.2*		39.2	53.7		67.2
COKER 9553	71.8	75.3		89.3	76.4*		47.8	58.5*		71.6
Delta Grow 1600	80.8			83.6			29.9			68.8
Delta Grow 4100	70.9	67.4		76.1	66.5		28.5	44.0		61.7
Delta Grow 4500	71.9	61.5	62.5	78.5	58.4	59.8	29.3	41.7	45.3	63.3
Delta Grow 5200	68.9	65.8		81.6	66.2		30.3	43.7		63.5
Delta King 7710	74.8	73.6	71.9	79.9	64.3	62.3	42.5	54.5	56.1	68.1
Delta King 7830	74.1	70.2	69.5	76.6	69.0	65.2	44.0	54.0	54.4	68.1
Delta King 9410	75.1	71.8	71.3	78.2	68.6	66.5	38.0	52.1	55.2	66.8
Delta King 9577	81.6	73.9		84.7	69.4		34.8	49.4		70.8
Delta King GR9108	69.0			83.3			41.5			66.4
Dixie 500	66.7			73.8			27.4			59.3
Dixie 900	70.3	67.3	68.2	76.4	65.8	64.7	36.4	47.5	51.0	64.1
Dixie 9512	70.3	65.5	66.5	79.4	67.4	65.8	31.0	46.2	49.7	63.5
Dixie DX989	83.0*			88.1			33.6			71.8
Dyna Gro 401	69.5			78.3			30.4			62.7
Dyna Gro 410	68.9			79.4			30.2			62.3
Dyna Gro 415	69.4			78.3			31.9			62.9
Dyna Gro 427	69.3			79.0			31.3			62.7
EXCEL 173	75.2			81.7			43.1			69.3
EXCEL 201	73.7	68.0	68.1	77.9	66.6	64.6	29.4	43.6	49.2	64.1
EXCEL 307	70.2	69.0	69.4	78.0	65.3	62.8	36.7	48.8	52.7	64.3
EXCEL 361	68.6			72.3			40.6			62.7
EXCEL 388	68.7	65.7		75.2	67.0		37.9	51.4		63.5
EXCEL 392 TW	72.8	69.2	68.3	82.3	69.8	66.2	21.7	38.8	44.5	62.5
EXCEL 399	69.0	68.1		81.9	70.7		28.3	44.0		62.6

EXCEL 400-1	70.2	70.2	69.9	79.2	70.0	67.0	28.4	42.2	47.4	62.6
EXCEL 410 TW	71.6			81.4			30.7			64.3
FFR 8302	77.1	70.7	70.4	85.5	76.5*	73.2*	30.9	47.6	52.6	68.0
GA 951395-3E25	76.9			87.4			31.8			68.6
JGL Exp. 604	68.0			81.3			23.1			60.4
LEWIS 841	80.1			85.0			35.0			70.0
LEWIS 860	66.8			78.9			31.6			61.3
Merschman Barbie VII	72.6	68.6	68.2	77.7	66.2	65.2	29.4	46.4	50.7	63.1
Merschman Bintee VII	61.7			80.7			22.9			57.4
Merschman Genie IX	69.4	67.2	66.9	78.1	68.4	65.7	29.4	43.2	46.9	62.4
Merschman Katie X	64.6			79.7			32.0			60.9
MFA 2020	71.9	69.8	68.2	76.9	66.5	64.3	30.7	47.8	51.0	63.3
MFA 2318	69.8			78.5			28.8			61.9
MFA 2320	70.0			76.9			33.0			62.9
MO 011126	80.7			94.9*			57.0**			79.5*
MPV 14S-4	77.5	74.4	71.8	82.0	67.6	63.8	50.4	59.6*	58.2	72.5
MPV 16S-2	84.4*			79.4			39.6			71.5
MV5-46	73.0	66.7		81.1	69.9		46.6	55.2		69.3
Pioneer ® Variety 25R47	83.1*	80.1*	78.0**	96.1*	77.5*	74.0**	52.8*	62.1**	62.9**	80.0**
Pioneer ® Variety 25R54	79.0	74.9	73.1	89.4	75.9*	71.8*	50.5	56.4	52.5	75.4
Pioneer ® Variety 25R63	73.6			87.0			48.7			71.9
Pioneer ® Variety 25R78	82.5*	74.9	71.2	85.7	71.3	68.0	48.4	58.2*	56.8	75.2
Progeny 110	68.1	67.4	66.0	74.3	65.9	61.8	27.9	41.1	44.9	60.1
Progeny 133	70.5	68.2	67.3	76.4	66.7	62.6	28.7	41.6	45.0	61.6
Progeny 145	67.1	64.2	63.7	76.8	63.5	62.1	29.9	46.9	48.1	61.2
Progeny 166	68.4	67.6	66.6	77.6	66.9	64.5	26.8	44.1	48.0	60.7
Progeny 185	78.4	71.3		83.1	70.9		46.2	59.0*		72.0
Progeny 196	73.2			80.9			25.5			63.1
Roane	75.8	72.0	69.1	82.1	68.5	64.8	31.5	46.2	47.9	66.4
Truman	77.4	75.5	73.3	83.8	72.9	67.7	38.4	50.6	51.5	68.5
USG 3209	85.9**	81.3**	76.3*	87.8	75.7*	69.1	47.2	58.9*	58.5	77.0
USG 3244	77.2			81.3			38.7			68.8
USG 3430	74.5	70.2	69.5	80.2	68.5	65.8	39.9	53.3	54.6	68.0
Average	73.3	70.3	69.5	81.5	69.6	66.0	35.2	49.1	51.0	66.3
LSD (0.05)	3.5	3.0	2.3	5.2	5.0	3.7	5.5	4.5	3.5	2.7
CV%	7.0	8.9	8.2	7.8	12.3	11.9	18.9	15.8	14.3	9.2
Locations	3	6	8	2	4	6	2	4	6	7

** Indicates the variety with the highest yield or test weight in the respective column.

* Indicates varieties that do not differ significantly in yield or test weight from the best variety based on Fisher's protected LSD ($P=0.05$).

† Yields are based on a 60 pound standard bushel weight, adjusted to 13.0 percent moisture content of the grain.

‡ 2004 yield trials were lost at Trenton due to severe hail damage; therefore, the 3-year northern regional data reflect those missing data.

Table 14. Grain yield[†] for soft red winter wheats tested at seven locations in Missouri during 2006. Varieties are listed in descending order of state average yield.

Variety	Northern region			Southeastern region		Southwestern region		State average 2006
	Columbia	Novelty	Trenton	Charleston	Portageville	Lamar	Mt. Vernon	
	-----bu/acre-----							
Pioneer ® Variety 25R47	69.2	96.9**	83.3*	85.6*	98.9*	50.2	50.6**	80.0**
MO 011126	80.3*	86.7	73.2	89.2*	99.8**	68.4**	46.3*	79.5*
USG 3209	80.4*	94.7*	79.4*	82.6	91.7	52.1	41.6	77.0
Pioneer ® Variety 25R54	71.9	85.7	75.9	80.7	94.9*	59.1	44.3	75.4
Pioneer ® Variety 25R78	66.6	96.6*	78.7*	84.2*	91.3	48.4	48.0*	75.2
Bess	72.3	86.5	77.6	76.8	86.1	59.9	41.9	74.1
MPV 14S-4	71.2	86.5	70.8	75.1	85.2	56.9	45.7	72.5
AgriPro Cooper	60.5	88.9	84.2**	90.9**	98.4*	31.5	38.0	72.0
Progeny 185	69.4	92.8*	73.7	75.4	87.6	51.2	45.2	72.0
Pioneer ® Variety 25R63	60.7	84.9	77.0	82.4	94.2	50.2	45.2	71.9
Dixie DX989	74.9	93.2*	78.6*	79.1	89.1	22.9	44.6	71.8
COKER 9553	62.7	80.9	69.9	82.1	89.6	53.2	42.7	71.6
Armor 260Z	71.5	89.1	83.2*	81.6	93.6	27.9	40.0	71.5
MPV 16S-2	82.5**	94.4*	80.9*	77.0	91.3	34.4	45.2	71.5
Delta King 9577	81.5*	90.3	80.4*	80.4	86.5	27.7	44.3	70.8
LEWIS 841	74.4	91.8	73.8	78.0	89.0	31.2	37.2	70.0
EXCEL 173	71.4	90.9	76.2	79.3	84.8	42.6	43.8	69.3
MV5-46	59.1	85.5	73.5	75.7	83.3	45.0	43.0	69.3
Delta Grow 1600	74.5	88.6	80.6*	82.3	89.6	23.2	44.1	68.8
USG 3244	71.3	83.8	70.6	79.8	82.3	30.7	41.6	68.8
GA 951395-3E25	69.3	86.1	71.8	81.0	91.5	28.6	33.6	68.6
Truman	65.4	88.5	75.4	81.2	84.1	42.7	29.0	68.5
AgriPro Beretta	58.0	83.6	74.5	88.7*	93.5	28.9	38.4	68.2
AgriPro Branson	60.0	83.6	75.8	83.6	93.2	40.0	30.0	68.1
Delta King 7710	69.2	86.7	74.3	72.3	85.7	46.0	36.5	68.1
Delta King 7830	66.9	84.0	70.9	76.9	77.6	42.5	39.8	68.1
FFR 8302	68.6	87.3	76.9	76.8	94.2	30.8	31.3	68.0
USG 3430	65.6	80.1	72.8	77.0	82.7	36.4	39.0	68.0
AGS 2000	63.2	85.5	70.5	74.9	87.3	45.1	38.5	67.5
COKER 9511	64.0	76.5	69.1	84.2*	91.7	39.2	40.4	67.2
Delta King 9410	70.1	83.4	73.2	72.7	83.1	34.9	38.3	66.8
Delta King GR9108	64.1	81.6	64.5	78.6	87.5	42.1	39.4	66.4
Roane	65.4	88.4	71.9	76.7	86.3	23.8	41.0	66.4
AgriPro Benton	59.9	84.3	76.6	80.5	88.5	39.0	29.7	66.0
AgriPro D01-7759	62.8	84.3	77.1	67.6	83.1	38.6	40.2	65.7
Armor 3330	61.9	82.3	71.6	78.3	86.1	26.3	34.0	64.8
EXCEL 307	52.3	83.0	73.3	77.9	79.8	33.0	33.6	64.3
EXCEL 410 TW	58.5	79.2	73.0	78.9	81.8	26.1	37.9	64.3
Dixie 900	56.3	81.5	72.6	79.6	77.9	32.8	36.3	64.1

EXCEL 201	56.3	87.9	81.8*	77.5	83.5	26.8	37.2	64.1
Delta Grow 5200	55.8	83.9	71.0	78.9	83.3	24.6	36.0	63.5
Dixie 9512	53.3	86.8	71.9	72.4	81.7	29.4	33.5	63.5
EXCEL 388	54.7	80.9	71.5	74.3	79.3	30.4	36.8	63.5
Delta Grow 4500	62.1	80.1	69.4	75.8	83.9	25.8	34.1	63.3
MFA 2020	56.9	81.2	73.2	70.5	79.5	29.2	33.2	63.3
Merschman Barbie VII	58.9	79.5	73.0	77.1	80.1	24.4	34.9	63.1
Progeny 196	61.3	83.0	70.7	86.8*	82.6	37.4	18.4	63.1
Dyna Gro 415	55.3	78.4	72.3	82.2	81.1	36.4	31.3	62.9
MFA 2320	57.4	83.4	73.6	80.0	78.4	32.2	36.2	62.9
Armor 3015	54.3	91.2	75.8	74.9	84.6	16.6	31.9	62.8
Armor 5110	55.7	84.7	72.0	73.7	82.6	24.5	36.8	62.8
Armor 3035	58.1	78.0	77.1	76.8	79.6	27.9	30.9	62.7
Dyna Gro 401	53.6	82.8	71.9	75.6	80.8	28.9	33.5	62.7
Dyna Gro 427	56.3	76.9	70.2	77.1	81.0	26.1	36.6	62.7
EXCEL 361	50.9	81.6	69.4	64.5	77.2	46.2	36.7	62.7
EXCEL 399	57.5	82.5	71.3	78.4	81.0	24.7	37.3	62.6
EXCEL 400-1	59.4	78.5	72.3	81.3	81.3	30.8	30.9	62.6
EXCEL 392 TW	58.8	87.1	75.6	74.4	92.7	17.0	30.7	62.5
Merschman Genie IX	58.4	80.3	73.8	72.2	81.9	25.1	34.7	62.4
Dyna Gro 410	52.0	81.5	74.8	75.4	80.3	28.5	33.7	62.3
MFA 2318	60.8	78.1	68.3	76.2	84.0	20.0	34.1	61.9
Delta Grow 4100	57.9	83.2	70.7	75.4	78.5	18.3	36.0	61.7
Armor 2010	54.0	80.6	67.6	74.0	81.6	24.9	33.9	61.6
Progeny 133	56.9	81.3	70.1	74.8	77.9	27.0	32.1	61.6
LEWIS 860	53.2	81.2	70.1	78.3	80.2	27.9	33.3	61.3
Progeny 145	53.6	80.3	72.9	76.7	74.9	27.1	34.3	61.2
Merschman Katie X	49.2	83.3	69.4	74.2	80.4	25.9	32.5	60.9
Progeny 166	54.2	81.7	67.7	73.2	84.4	20.7	35.9	60.7
JGL Exp. 604	52.4	77.2	81.7*	84.6*	83.4	16.9	29.4	60.4
Progeny 110	51.6	80.3	68.2	68.2	74.6	22.2	29.3	60.1
Dixie 500	50.3	78.2	72.3	67.5	80.1	27.5	31.7	59.3
Merschman Bintee VII	48.5	71.7	64.7	83.9	78.4	16.2	30.7	57.4
Average	61.9	84.2	73.7	78.0	85.0	33.5	36.9	66.7
LSD (0.05)	4.6	4.8	6.0	6.9	5.5	8.4	4.8	2.7
CV%	6.0	4.6	7.0	7.1	5.3	20.1	10.6	9.2

** Indicates the variety with the highest yield or test weight in the respective column.

* Indicates varieties that do not differ significantly in yield or test weight from the best variety based on Fisher's protected LSD ($P=0.05$).

† Yields are based on a 60 pound standard bushel weight, adjusted to 13.0 percent moisture content of the grain.

University of Missouri - Columbia



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