9-1-2011

Res Rep 12-01 Wheat and Oat Variety Performance Tests in Tennessee 2011

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Research Report 12-01

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Variety test results are posted on UT's website at http://varietytrials.tennessee.edu and www.UTcrops.com

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INSTITUTE of AGRICULTURE

Acknowledgments

This research was funded by the Tennessee Agricultural Experiment Station and UT Extension with partial funding from participating companies.

We gratefully acknowledge the assistance of the following individuals in conducting these experiments:

Dept. of Plant Sciences
Dennis West, Professor and Grains Breeder
David Kincer, Research Associate
Kara Warwick, Graduate Research Assistant
Jennifer Lane, Graduate Research Assistant
Virginia Sykes, Graduate Research Assistant

Research and Education Centers:

East Tennessee Research and Education Center, Knoxville
Robert Simpson, Center Director
Bobby McKee, Sr. Farm Crew Leader

Plateau Research & Education Center, Crossville
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Greg Blaylock, Light Farm Equipment Operator
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Highland Rim Research and Education Center, Springfield
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General Information

Research and Education Center Tests: The 2011 variety performance tests were conducted on 71 soft red winter wheat varieties in each of the physiographic regions of the state. Tests were conducted at the East TN (Knoxville), Plateau (Crossville), Highland Rim (Springfield), Middle TN (Spring Hill), Milan (Milan) and West TN (Jackson) Research and Education Centers and at the Agricenter International Research Center in Memphis.

All varieties were seeded at rates from 26-32 seed per square foot (Table 1). Plots were seeded with drills using 7–7.5 inch row spacings. The plot size was six, seven, eight or ten rows, 20 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 15 soft red winter wheat varieties across eight counties in Middle and West Tennessee (Dyer, Fayette, Franklin, Gibson, Henry, Lake, Moore and Weakley). 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 producers in their 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.

Wheat and Oat Silage Tests: In order to evaluate the 2011 wheat and oat varieties for silage yield, duplicate tests with differing randomizations were planted at the Middle Tennessee Research and Education Center. These data will be presented in the UT Extension Silage Tests publication SP618 later this year.

Growing Season: Hot, dry conditions during the fall of 2010 promoted early harvesting of summer crops; however, planting of small grains was later than usual across much of the state. The winter temperatures were unusually cold with some freezing damage to plants at some locations. According to the Tennessee Agricultural Statistics Service (TASS), the crop tolerated the winter in good condition and spring conditions were very good for wheat growth, albeit some areas experienced heavy rains and flooding. The wheat crop experienced a low incidence of disease and the weather conditions at maturity were very favorable for harvest. The result was a record 70 bu/a state average wheat yield in 2011. This record yield surpasses the previous best of 64 bu/a set in 2006. Tennessee producers planted approximately 390,000 acres of wheat in the fall of 2010, up 50% from the previous year. Approximately 310,000 acres were harvested for grain, which was 130,000 acres more than in 2010. The remaining 80,000 acres were utilized for hay, silage, cover crop or were lost due to flooding. According to TASS, the total wheat production in Tennessee for 2011 is 21.7 million bushels, more than twice the production from 2010.

Interpretation of Data

The tables on the following pages have been prepared with the entries listed in order of performance, with 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 bu/a = LSD of 8) and Variety A (63 - 50 = 13 bu/a > 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 2011, 71 wheat varieties were evaluated in seven research and education center (REC) tests, and 15 varieties were evaluated in eight county standard tests (CST). All 15 varieties in the CST were also present in the REC tests (Table 5). Eleven companies and five universities entered varieties into the tests this year. The average yield of the 71 varieties in the 2011 REC tests was 70 bu/a (range from 58 to 80 bu/a, Table 2). The varieties ranged in maturity from 218 to 226 days after planting (DAP) with most of the varieties clustering around 220. The test weight values ranged from 51.6 to 57.4 lbs/bu (Table 3). The average yield of the 20 varieties in the county tests was 89.4 bu/a, with individual varieties ranging from 84.9 to 92.2 bu/a. The test weight values ranged from 54.6 to 59.9 lbs/bu (Table 4).

Table 1. Location information from Research and Education Centers where the wheat variety tests were conducted in 2011.

Research and Education Center	Location	Planting Date	Harvest Date	Seeding Rate	Soil Type
Knoxville	Knoxville	10/19/2010	6/21/2011	28/ft^2	Huntington Silt Loam
Plateau	Crossville	10/19/2010	6/25/2011	28/ft^2	Hendon Silt Loam
Highland Rim	Springfield	10/28/2010	6/20/2011	28/ft^2	Mountview Silt Loam
Middle Tennessee	Spring Hill	10/19/2010	7/1/2011	26/ft^2	Maury Silt Loam
West Tennessee	Jackson	11/1/2010	6/9/2011	28/ft^2	Dexter Silt Loam
Milan	Milan	11/8/2010	6/13/2011	32/ft^2	Grenada Silt Loam
Agricenter International	Memphis	11/9/2010	6/22/2011	28/ft^2	Falaya Silt Loam

Table 2. Mean yields† of 71 soft red winter wheat varieties evaluated at seven locations in Tennessee during 2011.

Brand	Variety	Avg. Yield ± Std Err. (n=7)‡	Knoxville 10/19/10 §	Crossville 10/19/10	Springfield 10/28/10	Spring Hill 10/19/10	Jackson 11/1/10	Milan 11/8/10	Memphis 11/9/10
		bu/a							
Pioneer	26R10	80 ± 2	107	70	73	70	95	75	75
Terral	TV8861	79 ± 2	91	71	79	65	96	74	77
Progeny	357	78 ± 2	86	72	76	64	97	76	77
Terral	TV8848	78 ± 2	89	67	66	69	103	76	79
Pioneer	26R15	78 ± 2	90	72	73	65	102	68	74
Cache River Valley Seed	Dixie McAlister	78 ± 2	95	64	74	55	102	78	75
USG	3251	77 ± 2	91	60	65	67	92	72	94
Dyna-Gro	9171	77 ± 2	91	62	72	59	111	74	69
Progeny	870	76 ± 2	93	64	68	63	102	74	72
Delta Grow	7500	76 ± 2	86	64	66	63	111	74	70
Cache River Valley Seed	Dixie Kelsey	76 ± 2	86	67	63	71	102	73	71
Terral	TV8626	76 ± 2	84	63	71	69	97	67	78
Dyna-Gro	Shirley	76 ± 2	95	63	70	68	101	70	63
Croplan Genetics	8302	75 ± 2	90	61	65	60	102	74	73
TN Exp.	TN 1102	75 ± 2	83	62	73	60	97	74	73
Dyna-Gro	9053	74 ± 2	84	59	71	61	95	71	79
Dyna-Gro	9922	74 ± 2	81	54	63	72	94	71	80
USG	3770	73 ± 2	79	62	67	69	96	71	70
Syngenta	SY 9978	73 ± 2	55	69	75	66	104	73	73
Pioneer	26R22	73 ± 2	84	63	75	66	91	72	61
Armor	Ricochet	73 ± 2	84	56	70	69	99	72	58
MO	Milton	73 ± 2	87	64	62	72	94	67	62
TN Exp.	TN 902	72 ± 2	77	64	74	71	96	77	48
Pioneer	26R20	72 ± 2	77	63	73	70	91	67	63
VA Exp.	VA05W-251	72 ± 2	85	58	62	81	97	64	57
USG	3438	72 ± 2	83	60	67	63	91	71	69
Dyna-Gro	9012	72 ± 2	86	61	59	63	91	70	73
USG	3201	72 ± 2	77	68	67	64	89	67	70
Terral	TV8535	71 ± 2	89	63	59	70	88	67	62
Warren Seed	McKenna 200	71 ± 2	84	60	64	64	89	69	68
Syngenta	W1104	71 ± 2	78	61	66	69	90	64	67
USG	3555	71 ± 2	90	66	65	55	96	59	62
Terral	TV8589	70 ± 2	68	65	72	68	94	63	64
Armor	Renegade	70 ± 2	80	60	63	68	87	67	67

(continued)

Table 2. Mean yields† of 71 soft red winter wheat varieties evaluated at seven locations in Tennessee during 2011.

Brand	Variety	Avg. Yield ± Std Err. (n=7)‡	Knoxville 10/19/10 §	Crossville 10/19/10	Springfield 10/28/10	Spring Hill 10/19/10	Jackson 11/1/10	Milan 11/8/10	Memphis 11/9/10
		bu/a							
Pioneer	25R32	70 ± 2	78	53	66	64	88	66	75
USG	3120	70 ± 2	69	60	67	69	87	70	67
VA	Jamestown	70 ± 2	89	58	58	58	88	65	71
TN Exp.	TN 1101	69 ± 2	69	61	67	67	93	73	53
Armor	ARX 0186	69 ± 2	88	59	71	55	77	71	61
Terral	TV8525	69 ± 2	83	55	65	69	82	68	60
USG	3409	69 ± 2	81	68	64	70	89	49	61
TN Exp.	TN 1002	69 ± 2	62	66	65	66	95	69	58
VA	Merl	68 ± 2	78	55	73	56	90	64	63
Progeny	117	68 ± 2	79	62	66	63	92	71	47
Cache River Valley Seed	Dixie 454	68 ± 2	69	60	61	68	90	64	65
Croplan Genetics	8925	68 ± 2	76	52	63	65	79	65	76
Syngenta	Oakes	67 ± 2	91	60	62	61	75	66	57
Progeny	125	67 ± 2	85	61	63	72	74	59	58
TN Exp.	TN 1103	67 ± 2	91	56	60	59	89	67	48
Syngenta	Branson	67 ± 2	93	49	60	60	80	66	59
Warren Seed	McKay 100	67 ± 2	71	55	67	64	84	67	60
MO	Bess	67 ± 2	71	54	67	65	89	63	57
Croplan Genetics	8614	66 ± 2	73	59	59	59	88	69	58
MO	Truman	66 ± 2	78	50	53	72	93	55	62
NC Exp.	Yadkin	66 ± 2	88	60	62	64	59	65	65
VA Exp.	VA05W-139	66 ± 2	88	54	61	60	73	60	67
USG	3209	66 ± 2	72	58	61	67	86	60	58
Progeny	185	66 ± 2	62	61	60	65	83	68	63
USG	3295	66 ± 2	78	65	63	62	79	47	67
Progeny	166	65 ± 2	61	50	66	70	90	65	56
OH	Malabar	65 ± 2	63	57	64	63	87	58	61
USG	3350	64 ± 2	68	45	64	66	80	63	61
USG	3345	64 ± 2	83	52	57	62	71	63	58
Terral	TV8558	64 ± 2	80	66	61	58	81	46	54
Progeny	PGX10-2	63 ± 2	68	60	54	58	82	64	51
Delta Grow	5000	61 ± 2	75	54	49	63	81	57	51
Delta Grow	7900	61 ± 2	60	50	55	66	82	74	43

(continued)

Table 2. Mean yields† of 71 soft red winter wheat varieties evaluated at seven locations in Tennessee during 2011.

Brand	Variety	Avg. Yield ± Std Err. (n=7)‡	Knoxville 10/19/10 §	Crossville 10/19/10	Springfield 10/28/10	Spring Hill 10/19/10	Jackson 11/1/10	Milan 11/8/10	Memphis 11/9/10
		bu/a							
Terral	LA821	61 ± 2	57	48	67	68	77	56	51
Armor	ARX 0179	60 ± 2	52	49	55	63	75	66	58
Delta Grow	8300	59 ± 2	64	50	60	59	66	57	58
Terral	TVX8460	58 ± 2	73	37	54	73	75	46	47
Average (bu/a)		**70**	**80**	**60**	**65**	**65**	**89**	**67**	**64**
L.S.D.$_{.05}$ (bu/a)		**4**	**12**	**10**	**9**	**12**	**15**	**8**	**14**
C.V. (%)		**10.1**	**8.9**	**10.3**	**8.9**	**11.4**	**10.2**	**6.9**	**12.9**

† All yields are adjusted to 13.5% moisture.

‡ n = number of environments

§ Planting date

Table 3. Mean yields† and agronomic characteristics of 71 soft red winter wheat varieties evaluated at seven locations in Tennessee during 2011.

Brand	Variety	Avg. Yield ± Std Err. (n=7)‡	Moisture (n=7)	Test Weight# (n=1)	Emergence (n=1)	Vigor (n=1)	Heading (n=1)	Maturity (n=5)	Height (n=7)	Lodging (n=6)	Protein* (n=1)	Awns (n=1)
		bu/a	%	lbs/bu	Score	Score	DAP	DAP	in.	Score	%	trait
Pioneer	26R10	80 ± 2	14.9	54.4	1.7	2.5	188	220	33	1.0	11.2	a
Terral	TV8861	79 ± 2	15.4	55.5	1.2	2.5	187	221	32	1.1	11.0	a
Progeny	357	78 ± 2	15.0	52.5	1.5	2.7	190	221	32	1.0	10.5	a
Terral	TV8848	78 ± 2	15.1	55.1	1.3	2.7	189	222	34	1.1	11.6	a
Pioneer	26R15	78 ± 2	14.5	54.3	1.5	2.3	190	220	34	1.0	11.5	a
Cache River Valley Seed	Dixie McAlister	78 ± 2	14.3	52.8	1.5	2.5	186	219	32	1.0	10.6	a
USG	3251	77 ± 2	14.8	54.9	1.7	3.0	191	220	34	1.0	10.8	a
Dyna-Gro	9171	77 ± 2	14.5	53.3	1.3	2.5	186	219	32	1.0	10.7	a
Progeny	870	76 ± 2	14.1	53.1	2.0	2.7	186	219	32	1.0	10.8	a
Delta Grow	7500	76 ± 2	14.0	53.2	1.5	2.5	186	219	32	1.0	10.7	a
Cache River Valley Seed	Dixie Kelsey	76 ± 2	15.3	55.6	1.2	2.3	189	220	32	1.1	11.7	a
Terral	TV8626	76 ± 2	14.6	52.3	1.7	2.3	191	221	33	1.1	10.8	a
Dyna-Gro	Shirley	76 ± 2	14.8	54.0	1.3	2.7	190	221	31	1.1	11.5	pa
Croplan Genetics	8302	75 ± 2	15.1	55.2	1.5	2.0	188	220	34	1.0	11.6	a
TN Exp.	TN 1102	75 ± 2	15.0	55.1	1.2	2.0	188	221	35	1.2	11.8	a
Dyna-Gro	9053	74 ± 2	14.4	51.6	1.3	2.5	190	220	33	1.0	11.0	a
Dyna-Gro	9922	74 ± 2	14.8	56.0	1.0	2.5	189	220	34	1.0	10.8	a
USG	3770	73 ± 2	15.3	56.0	1.2	2.5	190	220	33	1.1	11.6	a
Syngenta	SY 9978	73 ± 2	14.7	53.6	1.2	2.2	190	220	36	1.5	12.2	a
Pioneer	26R22	73 ± 2	14.6	54.7	1.3	2.8	187	220	34	1.0	10.8	a
Armor	Ricochet	73 ± 2	15.0	53.2	1.3	2.8	190	219	32	1.0	10.8	a
MO	Milton	73 ± 2	14.9	55.8	1.7	2.3	188	220	35	1.0	11.3	a
TN Exp.	TN 902	72 ± 2	14.8	53.4	1.0	2.2	189	219	35	1.3	11.5	l
Pioneer	26R20	72 ± 2	15.1	55.0	1.3	2.5	190	220	33	1.2	11.5	a
VA Exp.	VA05W-251	72 ± 2	14.4	55.4	2.0	2.2	188	220	30	1.1	10.7	l
USG	3438	72 ± 2	14.3	52.7	1.3	2.7	186	220	31	1.0	11.4	a
Dyna-Gro	9012	72 ± 2	15.0	55.8	1.7	2.5	189	220	32	1.0	12.0	a
USG	3201	72 ± 2	14.9	55.6	1.5	2.7	190	220	32	1.1	11.7	a
Terral	TV8535	71 ± 2	14.5	52.9	1.3	2.5	186	220	32	1.0	11.3	a
Warren Seed	McKenna 200	71 ± 2	14.9	55.5	1.3	2.5	190	221	33	1.0	11.8	a
Syngenta	W1104	71 ± 2	15.2	53.4	1.5	2.7	192	221	33	1.3	12.0	l
USG	3555	71 ± 2	15.2	54.0	1.5	2.0	189	220	30	1.1	11.9	pa
Terral	TV8589	70 ± 2	14.7	54.1	1.0	2.5	190	222	35	1.1	11.0	l
Armor	Renegade	70 ± 2	15.5	55.2	1.3	2.7	189	220	35	1.0	11.0	a

(continued)

Table 3. Mean yields† and agronomic characteristics of 71 soft red winter wheat varieties evaluated at seven locations in Tennessee during 2011.

Brand	Variety	Avg. Yield ± Std Err. (n=7)‡	Moisture (n=7)	Test Weight# (n=1)	Emergence (n=1)	Vigor (n=1)	Heading (n=1)	Maturity (n=5)	Height (n=7)	Lodging (n=6)	Protein* (n=1)	Awns (n=1)
		bu/a	%	lbs/bu	Score	Score	DAP	DAP	in.	Score	%	trait
Pioneer	25R32	70 ± 2	14.9	55.0	1.3	3.0	191	220	34	1.0	11.5	a
USG	3120	70 ± 2	15.0	56.3	1.2	1.8	188	221	35	1.5	11.9	a
VA	Jamestown	70 ± 2	14.7	57.2	1.2	1.7	187	219	32	1.2	11.8	a
TN Exp.	TN 1101	69 ± 2	14.3	52.2	1.3	1.7	189	219	35	1.4	11.8	a
Armor	ARX 0186	69 ± 2	14.6	55.1	1.2	2.5	189	220	33	1.0	11.8	a
Terral	TV8525	69 ± 2	14.7	54.8	1.0	2.3	188	220	32	1.0	12.1	a
USG	3409	69 ± 2	14.6	55.3	1.3	2.5	189	218	35	1.1	11.4	l
TN Exp.	TN 1002	69 ± 2	14.4	52.5	1.0	1.5	188	218	35	1.6	12.0	a
VA	Merl	68 ± 2	15.0	56.6	1.0	2.5	189	220	32	1.0	11.4	pa
Progeny	117	68 ± 2	14.8	55.8	1.2	2.2	188	220	35	1.2	10.9	l
Cache River Valley Seed	Dixie 454	68 ± 2	15.6	56.8	1.2	2.5	190	220	35	1.1	12.5	pa
Croplan Genetics	8925	68 ± 2	14.9	56.0	1.8	3.0	190	222	34	1.0	10.4	a
Syngenta	Oakes	67 ± 2	16.1	57.4	1.2	2.3	189	220	33	1.1	10.9	pa
Progeny	125	67 ± 2	13.9	55.1	1.5	2.0	188	218	32	1.0	11.2	l
TN Exp.	TN 1103	67 ± 2	14.3	52.8	1.0	1.7	189	219	32	1.1	12.4	pa
Syngenta	Branson	67 ± 2	15.4	54.5	1.8	3.0	188	218	33	1.0	11.0	pa
Warren Seed	McKay 100	67 ± 2	14.7	54.3	1.2	2.7	189	220	37	1.0	10.9	pa
MO	Bess	67 ± 2	14.8	55.7	1.2	2.5	188	221	34	1.2	11.9	l
Croplan Genetics	8614	66 ± 2	14.8	54.5	2.0	2.7	189	219	37	1.1	11.3	l
MO	Truman	66 ± 2	15.1	55.8	1.0	2.5	196	226	38	1.0	11.2	l
NC Exp.	Yadkin	66 ± 2	14.6	55.4	1.0	2.3	189	220	32	1.0	11.3	pa
VA Exp.	VA05W-139	66 ± 2	14.7	55.7	1.2	2.5	190	220	31	1.0	12.1	pa
USG	3209	66 ± 2	15.2	54.6	1.5	1.8	188	219	32	1.4	11.6	l
Progeny	185	66 ± 2	14.7	54.8	1.7	2.7	188	222	34	1.1	11.3	pa
USG	3295	66 ± 2	15.5	56.3	1.5	2.3	189	220	32	1.0	12.1	pa
Progeny	166	65 ± 2	14.8	54.0	1.5	2.5	189	221	37	1.1	11.2	pa
OH	Malabar	65 ± 2	14.8	54.0	1.0	2.7	196	224	39	1.2	12.0	l
USG	3350	64 ± 2	14.9	53.3	1.3	2.7	188	221	35	1.0	11.3	pa
USG	3345	64 ± 2	15.0	56.8	1.7	2.5	190	221	32	1.1	11.2	pa
Terral	TV8558	64 ± 2	14.8	54.7	1.3	2.5	189	219	34	1.1	12.0	l
Progeny	PGX10-2	63 ± 2	15.3	56.7	1.7	2.7	190	221	34	1.2	11.6	l
Delta Grow	5000	61 ± 2	14.6	54.5	2.9	2.5	188	218	31	1.0	10.9	l
Delta Grow	7900	61 ± 2	15.0	55.1	1.3	2.5	187	220	34	1.3	12.3	pa

(continued)

Table 3. Mean yields† and agronomic characteristics of 71 soft red winter wheat varieties evaluated at seven locations in Tennessee during 2011.

Brand	Variety	Avg. Yield ± Std Err. (n=7)‡	Moisture (n=7)	Test Weight# (n=1)	Emergence (n=1)	Vigor (n=1)	Heading (n=1)	Maturity (n=5)	Height (n=7)	Lodging (n=6)	Protein* (n=1)	Awns (n=1)
		bu/a	%	lbs/bu	Score	Score	DAP	DAP	in.	Score	%	trait
Terral	LA821	61 ± 2	15.2	55.9	1.0	1.5	188	220	35	1.3	11.3	a
Armor	ARX 0179	60 ± 2	15.0	55.0	1.3	2.5	187	220	35	1.5	12.9	pa
Delta Grow	8300	59 ± 2	14.6	53.0	2.0	2.2	189	219	34	1.3	11.7	a
Terral	TVX8460	58 ± 2	14.5	54.2	3.3	3.5	189	222	36	1.0	10.9	pa
	Average	**70**	**14.8**	**54.7**	**1.4**	**2.4**	**189**	**220**	**34**	**1.1**	**11.4**	

† All yields are adjusted to 13.5% moisture.

‡ n = number of environments

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

Emergence = 1 to 5 scale; where 1 = 95%+ plants emergenced; 2.5 = ~50% plants emerged; 5 = <5% of plants emerged - taken at Knoxville on 3/8/11.

Vigor = 1 to 5 visual scale; where 1 = very vigourous growth; 2.5 = normal or average growth; 5 = low growth rate - taken at Knoxville on 3/8/11.

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°.

* Protein on dry weight basis.

Awns - a = awned, pa = partially awned, l = awnless

Table 4. Yields† of 15 soft red winter wheat varieties evaluated in eight County Standard Tests in Tennessee during 2011.

MS	Brand/Variety	Avg. Yield	Moisture	Test Weight‡	Dyer	Fayette	Franklin	Gibson	Henry	Lake	Moore	Weakley
		bu/a	%	lbs/bu	*10/28§*	*11/8*	*10/22*	*11/10*	*10/29*	*10/28*	*11/1*	*10/28*
A	**Progeny 117	92.2	12.6	58.3	91.0	92.4	126.0	79.6	88.9	82.1	122.4	54.9
AB	Dyna-Gro 9053	91.7	12.0	56.3	96.8	84.7	150.2	86.1	84.6	84.1	85.6	61.3
AB	Terral TV8861	91.5	13.6	57.1	93.1	81.4	132.1	93.6	88.8	85.7	101.9	55.4
AB	Warren Seed McKenna 200	91.4	12.8	58.9	97.0	93.0	125.5	80.4	83.0	85.3	113.1	54.3
AB	USG 3251	91.4	13.2	57.0	97.4	92.0	141.7	83.1	91.8	87.3	78.0	59.8
AB	*Syngenta Oakes	91.1	13.4	58.4	95.6	81.8	128.2	79.5	94.0	93.1	94.5	61.8
AB	USG 3120	89.4	12.7	59.9	97.0	89.6	112.2	72.9	86.6	90.8	120.3	46.1
AB	*USG 3201	89.4	12.7	59.5	95.5	87.5	115.6	80.4	89.1	88.7	103.1	55.0
AB	Armor Ricochet	89.3	12.4	56.8	96.5	78.5	117.2	90.7	95.0	90.3	85.8	60.1
AB	Progeny 185	89.2	12.8	56.9	91.7	92.1	126.7	81.7	81.6	84.1	104.9	50.9
AB	Syngenta Branson	88.4	13.1	56.9	92.1	88.0	130.1	84.4	78.5	88.2	93.2	52.2
AB	Warren Seed McKay 100	87.8	12.8	57.6	91.2	87.6	116.8	78.5	92.5	84.8	95.9	55.2
AB	Dyna-Gro 9012	87.7	12.8	58.8	88.6	87.7	120.1	78.9	89.0	85.6	93.9	57.9
AB	CRV/Dixie 454	85.3	13.2	57.8	90.5	88.3	121.0	82.0	81.0	80.7	89.0	49.5
B	Terral TV8589	84.9	13.0	54.6	88.6	71.7	108.1	85.0	83.8	81.5	103.6	56.7
	Average	**89.4**	**12.9**	**57.6**	**93.5**	**86.4**	**124.8**	**82.4**	**87.2**	**86.1**	**99.0**	**55.4**

† 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. - average of 8 locations.

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 2010 and/or 2009, respectively.

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

§ Planting date

Table 5. Yields† , moistures, and test weights of 15 soft red winter wheat varieties that were in common to both the County Standard (CST) Tests (n=8) and the Research and Education Center (REC) Tests (n=7) in Tennessee during 2011.

		Averages of CST & REC Tests			County Standard Tests			R E C Tests		
Brand	Variety	Avg. Yield	Moisture	Test Weight‡	Avg. Yield	Moisture	Test Weight	Avg. Yield	Moisture	Test Weight
		bu/a	%	lbs/bu	bu/a	%	lbs/bu	bu/a	%	lbs/bu
Terral	TV8861	85	14.5	56.3	92	13.6	57.1	79	15.4	55.5
USG	3251	84	14.0	55.9	91	13.2	57.0	77	14.8	54.9
Dyna-Gro	9053	83	13.2	53.9	92	12.0	56.3	74	14.4	51.6
Warren Seed	McKenna 200	81	13.8	57.2	91	12.8	58.9	71	14.9	55.5
Armor	Ricochet	81	13.7	55.0	89	12.4	56.8	73	15.0	53.2
USG	3201	81	13.8	57.6	89	12.7	59.5	72	14.9	55.6
Progeny	117	80	13.7	57.0	92	12.6	58.3	68	14.8	55.8
Dyna-Gro	9012	80	13.9	57.3	88	12.8	58.8	72	15.0	55.8
USG	3120	80	13.8	58.1	89	12.7	59.9	70	15.0	56.3
Syngenta	Oakes	79	14.7	57.9	91	13.4	58.4	67	16.1	57.4
Syngenta	Branson	78	14.2	55.7	88	13.1	56.9	67	15.4	54.5
Progeny	185	78	13.7	55.9	89	12.8	56.9	66	14.7	54.8
Terral	TV8589	77	13.8	54.3	85	13.0	54.6	70	14.7	54.1
Warren Seed	McKay 100	77	13.7	56.0	88	12.8	57.6	67	14.7	54.3
Cache River Valley Seed	Dixie 454	77	14.4	57.3	85	13.2	57.8	68	15.6	56.8
Average		**80**	**13.9**	**56.4**	**89**	**12.9**	**57.6**	**71**	**15.0**	**55.1**

† All yields are adjusted to 13.5% moisture.

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

Table 6. Mean yields† of 44 soft red winter wheat varieties evaluated at six locations (n=12) in Tennessee for two years, 2010 and 2011.

Brand	Variety	Avg. Yield ± Std Err. (n=12)‡	Knoxville	Crossville	Springfield	Spring Hill	Jackson	Milan
					bu/a			
USG	3251	74 ± 1	98	61	68	58	81	75
Terral	TV8861	73 ± 1	94	61	76	52	81	76
Pioneer	26R22	73 ± 1	94	60	69	62	78	73
TN Exp.	TN 902	73 ± 1	88	62	72	59	80	75
MO	Milton	72 ± 1	101	62	64	59	78	68
Armor	Ricochet	71 ± 1	94	58	66	57	81	70
Dyna-Gro	Shirley	71 ± 1	93	64	67	55	79	69
Dyna-Gro	9012	71 ± 1	89	69	65	55	77	71
Croplan Genetics	8302	71 ± 1	92	60	62	55	84	72
Pioneer	26R20	70 ± 1	86	59	66	62	75	71
USG	3201	70 ± 1	90	62	67	55	74	69
Cache River Valley Seed	Dixie 454	70 ± 1	84	59	62	59	85	68
USG	3770	70 ± 1	86	54	63	58	82	75
USG	3438	70 ± 1	88	55	66	55	80	73
Syngenta	W1104	69 ± 1	86	61	68	56	78	68
Pioneer	26R15	69 ± 1	90	57	65	53	81	67
Dyna-Gro	9922	69 ± 1	91	53	65	56	76	72
Progeny	117	68 ± 1	88	60	62	50	78	73
USG	3120	68 ± 1	82	59	69	56	74	70
Syngenta	SY 9978	68 ± 1	71	62	70	59	80	68
Syngenta	Oakes	68 ± 1	97	57	63	50	71	68
USG	3555	68 ± 1	88	66	65	47	78	63
Armor	Renegade	67 ± 1	92	52	66	51	76	67
Pioneer	25R32	67 ± 1	85	51	64	57	74	70
USG	3409	67 ± 1	88	62	63	53	71	63
Warren Seed	McKay 100	66 ± 1	83	51	66	54	74	69
Croplan Genetics	8925	66 ± 1	88	53	66	52	69	67
Progeny	125	66 ± 1	92	48	61	55	73	65
VA	Merl	66 ± 1	84	52	69	46	77	66
Progeny	166	65 ± 1	79	48	65	56	77	69
Terral	TV8589	65 ± 1	76	56	63	53	75	68
Syngenta	Branson	65 ± 1	88	50	57	50	73	69
USG	3209	65 ± 1	78	59	63	53	72	62
USG	3350	64 ± 1	84	44	67	53	72	67
Progeny	185	64 ± 1	78	55	59	51	75	68
Terral	TV8558	64 ± 1	86	61	63	46	71	56
MO	Bess	63 ± 1	84	46	63	52	72	63
Delta Grow	8300	63 ± 1	77	48	58	53	71	70
VA	Jamestown	63 ± 1	89	50	57	47	68	64
NC Exp.	Yadkin	63 ± 1	89	57	58	48	57	67
MO	Truman	62 ± 1	82	49	55	53	78	57
Delta Grow	5000	62 ± 1	84	48	52	49	73	65
OH	Malabar	61 ± 1	70	55	59	52	73	60
Terral	LA821	61 ± 1	76	46	62	54	66	61
Average (bu/a)		**67**	**86**	**56**	**64**	**54**	**75**	**68**
L.S.D.$_{.05}$ (bu/a)		**4**	**10**	**9**	**8**	**9**	**13**	**6**
C.V. (%)		**9.3**	**8.2**	**10.9**	**8.4**	**11.4**	**10.7**	**6.5**

† All yields are adjusted to 13.5% moisture.

‡ n = number of environments

Table 7. Mean yields† and agronomic characteristics of 44 soft red winter wheat varieties evaluated at six locations (n=12) in Tennessee for two years, 2010 and 2011.

Brand	Variety	Avg. Yield ± Std Err. (n=12)‡	Moisture (n=12)	Test Weight§ (n=2)	Heading (n=1)	Maturity (n=9)	Height (n=12)	Lodging (n=9)	Protein (n=2)	Septoria Leaf Blight (n=2)	Head Scab (n=1)
		bu/a	%	lbs/bu	DAP	DAP	in.	Score	%	Score	Score
USG	3251	74 ± 1	14.2	55.5	183	218	33	1.0	10.9	2.2	2.0
Terral	TV8861	73 ± 1	14.6	56.2	181	219	31	1.1	10.9	2.3	2.3
Pioneer	26R22	73 ± 1	13.6	54.6	181	217	34	1.1	10.4	2.7	1.7
TN Exp.	TN 902	73 ± 1	14.0	54.6	183	216	35	1.3	11.1	3.0	2.3
MO	Milton	72 ± 1	14.2	56.2	182	217	34	1.1	11.7	2.8	2.0
Armor	Ricochet	71 ± 1	13.9	53.8	186	216	30	1.1	10.8	2.7	2.0
Dyna-Gro	Shirley	71 ± 1	13.9	54.8	185	218	31	1.1	11.2	2.3	2.7
Dyna-Gro	9012	71 ± 1	14.4	56.5	184	217	32	1.1	11.5	3.0	2.0
Croplan Genetics	8302	71 ± 1	14.2	56.1	183	217	34	1.1	11.2	3.0	2.7
Pioneer	26R20	70 ± 1	14.0	55.6	185	217	33	1.2	10.9	2.7	2.0
USG	3201	70 ± 1	14.3	56.6	183	217	31	1.1	11.6	2.7	1.0
Cache River Valley Seed	Dixie 454	70 ± 1	14.5	57.9	183	219	34	1.1	11.9	2.7	1.3
USG	3770	70 ± 1	14.2	56.7	182	217	33	1.1	11.0	4.2	2.0
USG	3438	70 ± 1	13.5	53.2	181	216	31	1.0	11.1	2.7	3.0
Syngenta	W1104	69 ± 1	14.2	53.8	187	218	33	1.2	11.3	2.7	1.7
Pioneer	26R15	69 ± 1	13.8	54.3	184	217	33	1.0	11.8	3.0	3.0
Dyna-Gro	9922	69 ± 1	13.9	56.4	185	218	34	1.1	10.6	2.7	2.3
Progeny	117	68 ± 1	14.3	56.6	182	217	34	1.1	10.7	3.2	1.7
USG	3120	68 ± 1	14.2	57.1	181	218	35	1.4	11.4	3.2	2.7
Syngenta	SY 9978	68 ± 1	14.0	54.2	183	217	35	1.4	11.5	3.2	2.7
Syngenta	Oakes	68 ± 1	15.3	57.8	183	217	32	1.0	10.8	2.8	2.0
USG	3555	68 ± 1	14.3	55.0	182	218	30	1.1	12.0	2.3	1.7
Armor	Renegade	67 ± 1	14.4	56.2	185	218	34	1.1	10.6	2.3	2.0
Pioneer	25R32	67 ± 1	14.0	55.1	186	217	33	1.0	11.3	2.2	1.3
USG	3409	67 ± 1	13.9	55.4	183	216	34	1.1	11.2	3.2	2.3
Warren Seed	McKay 100	66 ± 1	14.1	55.4	182	217	36	1.1	10.8	2.8	1.7
Croplan Genetics	8925	66 ± 1	13.9	56.8	185	219	34	1.0	10.5	2.3	2.0
Progeny	125	66 ± 1	13.2	55.0	183	215	31	1.0	10.9	4.2	2.7
VA	Merl	66 ± 1	14.0	56.8	183	218	32	1.1	11.2	2.7	2.0
Progeny	166	65 ± 1	14.0	55.6	183	218	36	1.1	10.9	3.0	2.0
Terral	TV8589	65 ± 1	13.6	55.5	183	220	35	1.1	11.0	3.0	2.0
Syngenta	Branson	65 ± 1	14.4	54.9	182	215	32	1.0	11.0	3.5	3.3
USG	3209	65 ± 1	14.6	54.7	183	217	31	1.3	11.2	2.7	2.3
USG	3350	64 ± 1	14.2	55.0	182	217	36	1.1	11.0	3.2	2.3
Progeny	185	64 ± 1	13.9	55.5	182	219	33	1.1	11.0	3.0	2.0

(continued)

Table 7. Mean yields† and agronomic characteristics of 44 soft red winter wheat varieties evaluated at six locations (n=12) in Tennessee for two years, 2010 and 2011.

Brand	Variety	Avg. Yield ± Std Err. (n=12)‡	Moisture (n=12)	Test Weight§ (n=2)	Heading (n=1)	Maturity (n=9)	Height (n=12)	Lodging (n=9)	Protein (n=2)	Septoria Leaf Blight (n=2)	Head Scab (n=1)
		bu/a	%	lbs/bu	DAP	DAP	in.	Score	%	Score	Score
Terral	TV8558	64 ± 1	13.7	54.9	183	216	33	1.1	11.4	3.3	2.0
MO	Bess	63 ± 1	14.3	56.3	182	217	34	1.2	11.3	2.5	1.7
Delta Grow	8300	63 ± 1	13.8	54.4	183	217	33	1.3	11.3	2.3	2.3
VA	Jamestown	63 ± 1	13.8	57.4	180	216	31	1.1	11.8	3.5	3.0
NC Exp.	Yadkin	63 ± 1	13.9	56.1	184	218	32	1.0	11.4	2.8	2.0
MO	Truman	62 ± 1	14.7	55.5	191	222	37	1.1	10.8	1.9	1.0
Delta Grow	5000	62 ± 1	13.6	54.6	182	215	31	1.0	10.8	3.8	2.7
OH	Malabar	61 ± 1	14.3	54.8	191	221	38	1.1	11.5	2.3	1.0
Terral	LA821	61 ± 1	14.2	56.5	182	218	35	1.2	11.3	3.7	3.0
	Average	**67**	**14.1**	**55.6**	**183**	**217**	**33**	**1.1**	**11.1**	**2.9**	**2.1**

† All yields are adjusted to 13.5% moisture.

‡ n = number of environments

§ Official test weight of No. 2 wheat = 58 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°.

* Protein on a dry weight basis.

Septoria Leaf Blight, Head Scab = 1 to 5 scale; where 1 = no disease; 2.5 = ~50% plant tissue diseased; 5 = 95+% of plant tissue diseased.

Septoria Leaf Blight and Head Scab disease ratings taken at the Highland Rim (Springfield, TN) and West Tennessee (Jackson, TN) Research & Education Centers in 2010.

Table 8. Mean yields† of 25 soft red winter wheat varieties evaluated at six locations (n=18) in Tennessee for three years, 2009 - 2011.

Brand	Variety	Avg. Yield ± Std Err. (n=18)‡	Knoxville	Crossville	Springfield	Spring Hill	Jackson	Milan
					bu/a			
Dyna-Gro	Shirley	72 ± 1	100	65	66	52	85	64
Pioneer	26R22	72 ± 1	96	65	65	53	83	69
Croplan Genetics	8302	71 ± 1	94	65	62	51	87	68
MO	Milton	70 ± 1	98	66	62	52	80	62
Cache River Valley Seed	Dixie 454	69 ± 1	88	64	62	54	87	61
Pioneer	26R20	69 ± 1	86	65	63	56	79	66
Pioneer	26R15	69 ± 1	94	63	62	45	87	64
Dyna-Gro	9922	68 ± 1	93	54	66	49	82	66
USG	3120	68 ± 1	89	62	66	50	78	65
USG	3770	68 ± 1	90	59	59	51	81	68
Progeny	117	68 ± 1	90	62	60	48	79	67
Pioneer	25R32	67 ± 1	87	59	59	53	79	65
Armor	Renegade	66 ± 1	93	53	65	46	80	61
USG	3555	66 ± 1	93	67	61	42	81	53
Warren Seed	McKay 100	65 ± 1	84	55	61	48	80	65
USG	3409	65 ± 1	86	66	58	47	75	57
VA	Merl	64 ± 1	90	54	63	41	77	62
Syngenta	Oakes	64 ± 1	96	52	63	43	74	57
Progeny	166	64 ± 1	83	46	61	50	80	64
Syngenta	Branson	63 ± 1	96	48	58	42	72	64
Progeny	185	63 ± 1	88	51	57	42	77	65
MO	Bess	62 ± 1	87	50	60	46	75	56
USG	3209	62 ± 1	77	54	59	46	77	60
MO	Truman	61 ± 1	84	51	58	44	80	50
VA	Jamestown	60 ± 1	88	46	55	42	71	60
Average (bu/a)		**66**	**90**	**58**	**61**	**48**	**79**	**62**
L.S.D.$_{.05}$ (bu/a)		**4**	**10**	**10**	**7**	**8**	**11**	**7**
C.V. (%)		**9.7**	**8.2**	**12.1**	**8.3**	**12.8**	**9.6**	**8.5**

† All yields are adjusted to 13.5% moisture.

‡ n = number of environments

Table 9. Mean yields† and agronomic characteristics of 25 soft red winter wheat varieties evaluated at six locations (n=18) for three years, 2009 - 2011.

Brand	Variety	Avg. Yield ± Std Err. (n=18)‡	Moisture (n=18)	Test Weight§ (n=3)	Heading (n=2)	Maturity (n=14)	Height (n=18)	Lodging (n=12)	Protein* (n=3)	Septoria Leaf Blight (n=2)	Head Scab (n=1)
		bu/a	%	lbs/bu	DAP	DAP	in.	Score	%	Score	Score
Dyna-Gro	Shirley	72 ± 1	13.8	54.0	185	221	31	1.1	11.4	2.3	2.7
Pioneer	26R22	72 ± 1	13.7	54.4	181	219	34	1.1	10.9	2.7	1.7
Croplan Genetics	8302	71 ± 1	14.2	55.0	183	219	34	1.1	11.5	3.0	2.7
MO	Milton	70 ± 1	14.1	55.6	182	220	35	1.2	12.0	2.8	2.0
Cache River Valley Seed	Dixie 454	69 ± 1	14.5	57.1	183	221	35	1.2	12.3	2.7	1.3
Pioneer	26R20	69 ± 1	13.9	55.0	185	220	33	1.3	11.2	2.7	2.0
Pioneer	26R15	69 ± 1	13.7	53.4	184	220	33	1.1	12.1	3.0	3.0
Dyna-Gro	9922	68 ± 1	14.0	55.0	185	221	34	1.1	10.8	2.7	2.3
USG	3120	68 ± 1	14.1	56.5	181	220	35	1.4	11.6	3.2	2.7
USG	3770	68 ± 1	14.2	55.9	182	220	34	1.3	11.2	4.2	2.0
Progeny	117	68 ± 1	14.3	55.7	182	219	35	1.2	11.1	3.2	1.7
Pioneer	25R32	67 ± 1	14.0	54.7	186	220	34	1.2	11.5	2.2	1.3
Armor	Renegade	66 ± 1	14.3	55.5	185	221	34	1.0	10.7	2.3	2.0
USG	3555	66 ± 1	14.2	54.7	182	220	30	1.1	12.2	2.3	1.7
Warren Seed	McKay 100	65 ± 1	14.0	53.7	182	219	36	1.1	11.0	2.8	1.7
USG	3409	65 ± 1	13.8	54.5	183	219	34	1.1	11.7	3.2	2.3
VA	Merl	64 ± 1	13.9	56.3	183	220	32	1.1	11.4	2.7	2.0
Syngenta	Oakes	64 ± 1	15.3	57.0	183	220	33	1.1	11.2	2.8	2.0
Progeny	166	64 ± 1	14.1	54.5	183	220	37	1.1	11.0	3.0	2.0
Syngenta	Branson	63 ± 1	14.5	54.5	182	218	33	1.1	11.1	3.5	3.3
Progeny	185	63 ± 1	13.9	54.7	182	221	33	1.2	11.1	3.0	2.0
MO	Bess	62 ± 1	14.2	55.6	182	219	35	1.3	11.7	2.5	1.7
USG	3209	62 ± 1	14.5	53.6	183	219	32	1.5	11.4	2.7	2.3
MO	Truman	61 ± 1	14.7	54.5	191	224	37	1.1	11.2	1.9	1.0
VA	Jamestown	60 ± 1	13.8	57.0	180	219	31	1.2	12.0	3.5	3.0
	Average	**66**	**14.2**	**55.1**	**183**	**220**	**34**	**1.2**	**11.4**	**2.8**	**2.1**

† All yields are adjusted to 13.5% moisture.

‡ n = number of environments

§ Official test weight of No. 2 wheat = 58 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°.

* Protein on a dry weight basis.

Septoria Leaf Blight, Head Scab = 1 to 5 scale; where 1 = no disease; 2.5 = ~50% plant tissue diseased; 5 = 95+% of plant tissue diseased.

Septoria Leaf Blight and Head Scab disease ratings taken at the Highland Rim (Springfield, TN) and West Tennessee (Jackson, TN) Research & Education Centers in 2010.

---------- Oats ----------

Results

A fall-seeded oat test was conducted at the East TN (Knoxville) and Middle TN (Spring Hill) Research and Education Centers (REC) during 2010-2011 on 23 winter oat varieties / breeding lines. The Spring Hill location experienced storm damage, resulting in seed loss and lodging, which made harvest unfeasible and is therefore not included in these analyses.

The average yield of the 23 oat entries was 69 bu/a, ranging from 36 to 91 bu/a. Test weights ranged from 30.3 to 43.3 lbs/bu. The official test weight for oats is 36 lbs/bu. A moderate amount of winter injury occurred on some of the breeding lines at Knoxville, reducing overall stands for those lines. Eight of the 23 varieties have been evaluated over the two-year period 2010 - 2011. Four of the 23 varieties have been evaluated over the three-year period 2009 – 2011.

Table 10. Mean yields† and agronomic characteristics of 23 fall seeded oat lines evaluated at Knoxville, TN during 2011.

Origin	Line	Avg. Yield ± Std Err. (n=2)	Moisture at Harvest (n=1)	Test Weight § (n=1)	Emergence (n=1)	Vigor (n=1)	Winter Kill (n=1)	Heading (n=1)	Maturity (n=1)	Height (n=1)	Lodging (n=1)
		bu/acre	%	lb/bu	Score	Score	%	DAP	DAP	inches	1-5 score
TX	TX07CS3697	91 ± 6	10.4	34.0	1.5	2.2	3	199	248	44	1.7
LA	LA06059SBS-66	86 ± 6	10.4	34.5	1.5	2.2	7	196	240	41	2.0
NC	Rodgers	83 ± 6	10.1	34.9	1.5	2.5	8	197	237	41	1.2
NC	NC07-3966	82 ± 6	10.1	35.8	2	2.8	15	199	248	36	1.0
TX	TX02D079	81 ± 6	10.0	31.1	2.5	3.0	28	196	246	37	2.2
NC	NC07-3834	78 ± 6	9.8	35.2	1.0	3.0	10	198	241	36	1.0
FL	FL99913-J1-S1	77 ± 6	10.0	31.9	1.5	2.3	10	199	234	30	1.0
TX	TX09CS1066	76 ± 6	10.2	36.3	2.0	2.5	23	199	245	36	1.8
LA	Horizon 270	76 ± 6	10.1	32.6	2.0	3.2	15	196	240	34	1.2
TX	TX05CS556	74 ± 6	9.9	35.9	1.0	2.0	2	199	248	39	3.2
FL	Horizon 201	72 ± 6	10.2	32.3	2.0	2.7	17	197	247	41	2.7
LA	LA06041SBS-42	72 ± 6	10.5	37.0	1.0	2.5	7	197	246	43	1.7
NC	NC07-3801	69 ± 7	10.3	36.2	2.0	2.8	20	196	246	41	2.2
TX	TX09CS1112	67 ± 6	9.9	32.4	2.0	2.8	28	199	239	28	1.0
LA	LA05006GSBS-65-S1	66 ± 6	10.3	35.0	2.5	2.3	20	198	241	39	1.2
TX	TAMO 406	65 ± 6	10.2	34.1	2.5	3.5	25	196	240	37	2.5
LA	LA03063SBSBSB-S4	63 ± 6	10.1	34.6	2.0	2.8	18	199	243	37	2.0
LA	FL0522-FLID-B-S-B-S-92-S1	61 ± 6	10.6	35.1	2.0	2.3	28	196	246	38	2.0
TX	TX07CS2783	59 ± 6	9.7	30.6	2.5	2.8	25	197	244	36	1.7
FL	FL02011-I-J2	55 ± 6	12.4	43.3	2.0	2.2	18	199	246	39	1.3
FL	LA02012-S-B-139-S2-B-S1	47 ± 6	11.3	37.6	2.0	3.5	22	198	240	38	3.3
TX	TX09CS1025	46 ± 6	9.7	30.3	2.5	2.8	35	199	236	30	1.0
FL	FL04178-FLID-B-S-2	36 ± 6	11.6	40.7	2.0	2.2	15	199	236	36	2.5
	Average (bu/a)	**69**	**10.3**	**34.8**	**1.9**	**2.7**	**17**	**198**	**242**	**37**	**1.8**
	L.S.D.$_{.05}$ (bu/a)	**16**									
	C.V. (%)	**14.0**									

† All yields are adjusted to 14% moisture.

§ Official test weight of Oats = 36 lbs/bu.

Emergence = 1 to 5 scale; where 1 = 95%+ plants emergenced; 2.5 = ~50% plants emerged; 5 = <5% of plants emerged - taken at Knoxville on 3/8/11.

Vigor = 1 to 5 visual scale; where 1 = very vigourous growth; 2.5 = normal or average growth; 5 = low growth rate - taken at Knoxville on 3/8/11.

Winter kill notes taken on 3/8/11 - percentage of stand killed by frost.

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°.

Planted: 10/19/10 Seeding rate of 28 seed per square foot

Harvested: 6/21/10

Table 11. Mean yields† and agronomic characteristics of eight fall seeded oat lines evaluated at Knoxville, TN for two years, 2010 and 2011.

Origin	Line	Avg. Yield ± Std Err. (n=2)	Moisture at Harvest (n=2)	Test Weight § (n=2)	Winter Kill (n=2)	Heading (n=1)	Maturity (n=2)	Height (n=2)	Lodging (n=2)
		bu/acre	%	lb/bu	%	DAP	DAP	inches	1-5 score
TX	TX07CS3697	115 ± 6	10.8	34.5	5	192	236	41	1.6
FL	Horizon 201	97 ± 6	10.7	32.3	17	189	236	40	2.1
TX	TAMO 406	90 ± 6	10.5	34.0	22	191	230	37	2.0
NC	Rodgers	87 ± 6	10.7	34.6	14	191	228	40	1.3
TX	TX07CS2783	87 ± 6	10.1	30.7	17	194	232	38	2.1
LA	Horizon 270	85 ± 6	10.6	32.6	18	193	230	33	1.1
LA	LA03063SBSBSB-S4	85 ± 6	10.5	34.3	19	191	233	36	1.8
TX	TX05CS556	85 ± 6	10.5	35.1	8	194	234	36	2.1
	Average (bu/a)	**91**	**10.5**	**33.5**	**14.9**	**192**	**232**	**38**	**1.8**
	L.S.D.$_{.05}$ (bu/a)	**20**							
	C.V. (%)	**14.4**							

Table 12. Mean yields† and agronomic characteristics of four fall seeded oat lines evaluated at Knoxville, TN for three years, 2009 - 2011

Origin	Line	Avg. Yield ± Std Err. (n=3)	Moisture at Harvest (n=3)	Test Weight § (n=3)	Winter Kill (n=3)	Heading (n=1)	Maturity (n=2)	Height (n=3)	Lodging (n=3)
		bu/acre	%	lb/bu	%	DAP	DAP	inches	1-5 score
TX	TX05CS556	100 ± 5	10.9	34.5	7	194	238	38	2.6
FL	Horizon 201	100 ± 5	11.2	32.1	16	189	239	43	2.6
NC	Rodgers	99 ± 5	11.1	34.9	12	191	231	42	2.3
TX	TAMO 406	82 ± 5	10.8	33.9	19	191	232	40	3.0
	Average (bu/a)	**95**	**11.0**	**33.8**	**13.3**	**191**	**235**	**41**	**2.6**
	L.S.D.$_{.05}$ (bu/a)	**20**							
	C.V. (%)	**14.1**							

† All yields are adjusted to 14% moisture.

§ Official test weight of Oats = 36 lbs/bu.

Winter kill - percentage of stand killed by frost.

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°.

Seeding rate of 28 seed per square foot

Table 13. Contact information for wheat seed companies evaluated in yield tests in Tennessee during 2010-11.

Company	Contact	Phone	Email	Web site	Address
Armor, Delta King (Cullum Seeds)	Lane Dill	901-233-0274	lanedill@jwrayseeds.com	www.cullumseeds.com	P.O. Box 178, Fisher, AR 72429
Dixie (Cache River Valley Seed)	Jason McGarrh	870-275-2779	jasonm@crvseed.com	www.crvseed.com	P.O. Box 10, Cash, AR 72421
Croplan Genetics	Jesse Witt	256-221-5932	JBWitt@landolakes.com	www.croplangenetics.com	DSM Middle & East TN
	Keith Saum	731-610-7006	kdsaum@landolakes.com		DSM West TN
(available at TN Farmers Co-Op and Agreliance locations)	Ashley Plymale	270-719-1570			Agronomist
	Jim Payne	901-652-0903	jpayne@ourcoop.com	www.ourcoop.com	West TN
	Matt Sowder	901-355-7267			East & Middle TN
Delta Grow Seed	Lee Hughes	800-530-7933	leehughes19@hotmail.com	www.deltagrow.com	P O Box 219, England, AR 72046
Dyna-Gro (Crop Production Services)	Todd Theobald	731-885-1212 765-623-1382	todd.theobald@cpsagu.com	www.dynagroseed.com	710 South First Street, Union City, TN 38621
University of Missouri	Mary Ann Quade	573-884-7333	quadem@missouri.edu		University of MO Foundation Seed
	Anne McKendry	573-882-7707	mckendrya@missouri.edu		3600 New Haven Rd Columbia, MO 65201
North Carolina State University	Paul Murphy	919-513-0000	paul_murphy@ncsu.edu		NC State University 840 Method Rd., Unit 3 Raleigh, NC 27695-7629
Ohio Seed Improvement Association	John Armstrong	614-889-1136	armstrong@ohseed.org		6150 Avery Road, Box 477 Dublin, OH 43017-0477
Pioneer Hi-Bred Int.	Michael Hughes	800-331-2475	michael.hughes@pioneer.com	www.pioneer.com	700 Boulevard South, Suite 302, Huntsville, AL 35802
Progeny	Corey Dildine	870-208-6032	corey@progenyag.com	www.progenyag.com	1529 Hwy 193, Wynne, AR 72396
Syngenta	June Hancock	870-483-7691	june.hancock@syngenta.com	www.agriprowheat.com	778 CR 680, Bay, AR 72411
Terral Seed Inc	Larry Mullen	318-231-8811	lmullen@terralseed.com	www.terralseed.com	P O Box 826, Lake Providence, LA 71254
University of Tennessee	Dennis West	865-974-8826	dwest3@utk.edu		3421 Joe Johnson Dr, Knoxville, TN 37996-4561

(continued)

Table 13. Contact information for wheat seed companies evaluated in yield tests in Tennessee during 2009-10.

Company	Contact	Phone	Email	Web site	Address
Unisouth Genetics (USG)	Stacy Burwick	800-505-3133	sburwick@bellsouth.net	www.usgseed.com	2640-C Nolensville Rd., Nashville, TN 37211
	David Fandrich	931-967-3377	fandrichsupply@aol.com		Fandrich Supply Co, Belvidere, TN
	Mark Huffstetler	731-235-2167	huffy1@crunet.com		Huffstetler & Sons Seed Inc, Greenfield, TN
	Trey Hurt	731-836-7574	hurtco@bellsouth.net		Hurt Seed Co. Inc, Halls, TN
	Wes Miller	731-536-6251	wes@obiongrain.com		Obion Grain Co. Inc, Obion, TN
	Billy Sellers	731-538-2990			Sellers Seed, Obion, TN
Virginia Tech	David Whitt	804-746-4884	dwhitt@vt.edu	www.virginiacrop.org	Virginia Crop Improvement Assoc. 9142 Atlee Station Rd Mechanicsville, VA 23116
Warren Seed	Lanny Warren	731-234-2921	lanny.warren@charter.net		208 South Thompson St., Union City, TN 38261

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