



UNITED STATES DEPARTMENT OF AGRICULTURE  
Agricultural Research Service

State Agricultural Experiment Stations, Cooperating

**2012 - 2013**

**UNIFORM SOUTHERN SOFT RED WINTER WHEAT  
NURSERY**

**Report**

Compiled by: H.E. Bockelman, Agronomist

---

This is a joint progress report of cooperative investigations underway in the State Agricultural Experiment Stations and the Agricultural Research Service (ARS) of the U.S. Department of Agriculture containing preliminary data which have not been sufficiently confirmed to justify general release; interpretations may be modified with additional experimentation. ARS expressly does not warrant the validity of the data provided in this report coming from non-ARS sources. The report is primarily a tool for the use of the cooperators and their official staff and those persons having direct and special interest in the development of agricultural research programs.

USSRWWN cooperators may use the following data from this report in registration notices, release requests, and PVP applications: their line, the check entries, the mean of the test, and (with permission from the owners) any other lines that have already been released.

---

USDA-ARS  
National Small Grains Germplasm Research Facility  
1691 S. 2700 W.  
Aberdeen, ID 83210

December 2013

## TABLE OF CONTENTS

Entries & Pedigrees	3
Location Notes	4-8
Map of Locations	9
Yield	10-13
Test Weight	14-17
Heading Date	18-21
Height	22-24
Winter Damage	28
Lodging	25-27
Leaf Rust	29-33
Stem Rust	34-36
Stripe Rust	37-43
Septoria	44-45
Fusarium Head Blight (Scab)	46-47
Powdery Mildew	48-49
Viruses	50
Hessian Fly	51
Acid Soil Tolerance	52
Phenotype/Vernalization	53
Milling & Baking Quality	54-56

**2012-2013 UNIFORM SOUTHERN SOFT RED WINTER WHEAT NURSERY  
LIST OF ENTRIES AND PEDIGREES**

Entry No.	Cultivar/ Designation	Pedigree	Contributor	1st Year in Nursery
1	AGS 2000	Pio.2555/PF84301//FL 302 (formerly GA89482E7)	Check	97-98
2	Pioneer Brand 26R61	Omega78/S76/4/Arthur71/3/Stadler//Redcoat/Wisc1/5/Ck747/6/2555sib (formerly XW663)	Check	97-98
3	USG 3555	VA94-52-60/Pio2643//USG3209 (formerly VA02W-555)	Check	04-05
4	Jamestown	Roane/Pioneer Brand 2691 (formerly VA02W-370)	Check	04-05
5	NC08-23089	NC97-10076/C9704//P26R61	Murphy	11-12
6	NC08-23324	B960164/NC94-7197//McCormick	Murphy	11-12
7	VA10W-119	KY97C-0540-04(C9803/L910097//2552)/GA951079-2E31(GA881130/Gore)	Griffey	11-12
8	NC08-21273	USG3209//B970499/NC98-26541	Murphy	12-13
9	NC09-20765	NC00-16203//P26R24/NC96-13965	Murphy	12-13
10	TN1301	[Hickory/GA84386-1//FR555]-F6/B980696/[[Hickory/VA94-54-479//P2628/Coker 9663]-F6/[VA94-52-60/T91-427//Pioneer2628//T93-448/MO91-1003]-F6]	West	12-13
11	TN1302	(P2580/Hickory//VA94-54-479//FFRX304/Dozier)-F6/Dominion//AWD99*5725/[Wakefield/Coker 9543]-F6]	West	12-13
12	TN1303	AWD99*5725/TN603/[(VA94-52-68//Pioneer2580/T93-448)]-F6/VA98W-631	West	12-13
13	VA07W-415	VA98W-895[VA92-51-38(Roane'S')//KS89WGRC04/Ck9835]/GA881130LE5/VA98W-627RS(VA92-52-11/Ck9803)	Griffey	12-13
14	VA10W-123	P25R47/GF951079-2E31(GA881130/Gore)	Griffey	12-13
15	VA09W-110	USG3592(GA931241E16)/VA01W-303[GA8619-D25/VA93-52-55(Massey*3/Balkan//Saluda)//P2643]	Griffey	12-13
16	KWS011	P25R18/25W33*	Murche	12-13
17	KWS012	P26R25/McCormick	Murche	12-13
18	KWS013	VA96W-49/AGS2000/VA98W-430	Murche	12-13
19	AR00343-5-1	AR97052/Roane	Mason	12-13
20	AR01040-4-1	AR800-1-3-1/AR910-12-1	Mason	12-13
21	LA03200E-2	NC98-24710/P26R61	Harrison	12-13
22	LA05038D-105	SS8641/P26R61	Harrison	12-13
23	LA05130D-P5	LA98149BUB-3-4-B/SS8641	Harrison	12-13
24	LCS19701	IL99-26442/VA02W-555	Obert	12-13
25	LCS29817	MO03701/M99-2408	Obert	12-13
26	LCS19227	T814/L900819/VA98W-591	Obert	12-13
27	GA041052-11E51	GA931233/USG3592//GA941208-2E35	Johnson	12-13
28	GA041293-11E54	P26R61/2*SS8641	Johnson	12-13
29	GA041323-11E63	GA961565-2E46/GA961591-3E42	Johnson	12-13
30	GA041293-11LE37	P26R61/2*SS8641	Johnson	12-13
31	MD04W249-11-7	MV8-29/25R42	Costa	12-13
32	MD04W249-11-12	MV8-29/25R42	Costa	12-13
33	MD07W272-11-5	VA02W713//USG3555/25R42	Costa	12-13

## LOCATION NOTES

### **Belle Mina, Alabama**

Cooperator: Kathy Glass  
Auburn University  
Planted: November 9, 2012  
Harvested: June 24, 2013  
Fertilizer: 80 N

### **Stuttgart, Arkansas**

Cooperator: Esten Mason  
University of Arkansas  
Planted: November 8, 2012  
Harvested: June 21, 2013  
Fertilizer: 150 N split applications  
Notes: Uniform but severe winter damage from migrating Canadian geese and some waterlogging. Very little disease. Heading and height taken on only a single rep.

### **Quincy, Florida**

Cooperator: Ann Blount, Ron Barnett  
University of Florida  
Planted: November 28, 2012  
Harvested: late May  
Fertilizer: 500 lbs of 5-10-15 + 58 N  
Notes: Mild temperatures throughout season, wide variation in heading (over one month). Delayed harvest due to tropical storm led to late lodging and very low test weights.

### **Griffin, Georgia**

Cooperator: Jerry Johnson, Dan Bland, Steve Sutton, John Youmans  
University of Georgia  
Planted: October 31, 2012  
Harvested: June 10, 2013  
Fertilizer: 20 N preplant; 75 N topdress

### **Plains, Georgia**

Cooperator: Jerry Johnson, Dan Bland, Steve Sutton, John Youmans  
University of Georgia  
Planted: November 14, 2012  
Harvested: June 4, 2013  
Fertilizer: 15 N preplant; 75 N topdress

### **Harrisburg, Illinois**

Cooperator: Jana Murche  
KWS Cereals USA  
Planted: October 27, 2012  
Harvested: June 30, 2013

**Lafayette, Indiana**

Cooperator: Don Obert  
Limagrain Cereal Seeds  
Planted: October 30, 2012  
Harvested: July 5, 2013  
Notes: Planted about three weeks later than normal. Harvest date was about one week late.

**Lafayette, Indiana**

Cooperator: Ben Moreno  
WestBred

**West Lafayette, Indiana**

Cooperator: Sue Cambron  
USDA-ARS, Crop Production & Pest Control Research  
Notes: Hessian fly data with multiple biotypes.

**Winfield, Kansas**

Cooperator: Sid Perry  
WestBred  
Planted: October 20, 2012  
Harvested: June 24, 2013  
Notes: Late freeze damage. Bacterial infection defoliated plants during grain fill.

**Lexington, Kentucky**

Cooperator: Dave Van Sanford  
University of Kentucky  
Planted: October 18, 2012  
Harvested: July 5, 2013  
Fertilizer: 110 N in 2 applications; P,K according to soil test  
Notes: Rough year, excessive moisture during grain fill and ripening caused test weights to plummet.

**Baton Rouge, Louisiana**

Cooperator: Stephen Harrison, Kelly Arceneaux, R. Mascagni  
Louisiana State University  
Planted: November 10, 2012  
Harvested: May 28, 2013  
Fertilizer: 18-52-34+24S,7Zn preplant; 50-0-0 + 50-0-0 topdress  
Notes: Freeze damage, stripe rust, and phenotype data from Winnsboro. Significant freeze damage at Winnsboro, so no yield data. Leaf rust, stripe rust, and phenotype data from Crowley (head rows). Relative growth habit: 0=very early spring upright growth in early March; 9=very prostrate, not jointed. Stem rust is QFCS inoculated nursery head row with Coker 9553 as spreader every 6 rows (consistently a 7). Phenotype is mean of four 'general appearance' ratings: 0=excellent, 5=average, 9=very poor.

**Queenstown, Maryland**

Cooperator: Jose Costa  
University of Maryland  
Planted: October 8, 2012  
Harvested: June 25, 2013

**Salisbury, Maryland**

Cooperator: Jose Costa  
University of Maryland  
Planted: November 15, 2012  
Notes: Scab nursery. No harvest.

**St. Paul, Minnesota**

Cooperator: Jim Kolmer, Yue Jin  
USDA-ARS, Cereal Disease Laboratory  
Notes: Leaf rust and stem rust data.

**Newton, Mississippi**

Cooperator: Brad Burgess  
Mississippi State University  
Notes: Nursery was abandoned due to extensive bird and deer damage at the location.

**Portageville, Missouri**

Cooperator: Anne McKendry, David Tague  
University of Missouri  
Planted: November 11, 2012  
Harvested: June 20, 2013  
Fertilizer: 40-80 split  
Notes: Field was wet at planting. Conditions over winter were dry and cool. Late development compared to norms. Heat and disease pressure late. Little rain post physiological maturity.

**Kinston, North Carolina**

Cooperator: Paul Murphy  
North Carolina State University  
Planted: October 21, 2012  
Harvested: June 8, 2013  
Notes: Generally a good season for wheat production, but rains persisted through the end of season and harvest, causing test weight problems. Powdery mildew, height, heading, and BYDV data recorded at Lake Wheeler, Raleigh.

**Raleigh, North Carolina**

Cooperator: David Livingston, Tan Tuong  
USDA-ARS, Plant Science Research  
Notes: No freeze-test data due to equipment failure.

**Raleigh, North Carolina**

Cooperator: Christina Cowger

USDA-ARS, Plant Science Research

Notes: Eastern Septoria Nursery data. SNB only. Raleigh (Lake Wheeler) = two reps; each plot=2 adjacent headrows (3g/headrow), randomized order within maturity class (all late entries in one block, all early entries in a separate block). Planted October 20. Inoculated with wheat straw early February, one rectangular bale per headrow tray. Rated at late-milk/early-dough. Nursery quality was high and data were good. Kinston = two reps; each plot=2 adjacent headrows (3g/headrow), randomized order within maturity class (all late entries in one block, all early entries in a separate block). Planted early November. Inoculated with wheat straw early February, one rectangular bale per headrow tray. Nursery was affected by cold injury on earlier lines and fertility problems. Heavy leaf rust confounded SNB. Only one rep was rated. Rated at late-milk/early-dough. Data reported are means of the two Raleigh reps and one Kinston rep.

**Custar, Ohio**

Cooperator: Clay Sneller

Ohio State University, OARDC

Notes: Plots looked great and then the rains came. This delayed harvest by 1.5 to 2 weeks. Considerable shattering. CV was just 6.8, but should eye the results with caution. A single rep test.

**Wooster, Ohio**

Cooperator: Byung-Kee Baik

USDA-ARS, Soft Wheat Quality

Notes: Milling and baking quality data.

**Enid, Oklahoma**

Cooperator: Brett Carver

Oklahoma State University

Notes: Acid soil tolerance data. The most reliable ratings were taken on 27 April. Severe fall and winter drought conditions imposed bias, as good drought tolerance, especially at emergence, improved the early spring ratings of an otherwise acid soil-susceptible line. Spring tillering capability also imposed bias, as poor tillering capacity in January-February diminished the ratings of an otherwise acid soil-resistant line. Several late-winter freezes could have improved the perceived tolerance of a susceptible line, or diminished the tolerance of a resistant line, depending on winter dormancy release pattern. Weed competition compromised some readings, or in some cases, helped to highlight extreme susceptibility to soil acidity. Soil pH was about 4.2-4.5 as of June 2013.

**Knoxville, Tennessee**

Cooperator: Dennis West

University of Tennessee

Planted: October 19, 2012

Harvested: June 24, 2013  
Fertilizer: 30-30-90  
Notes: Lodging caused by eyespot (strawbreaker) fungal infection. Yield data probably of little value.

#### **Farmersville, Texas**

Cooperator: Russell Sutton  
Texas A&M AgriLife Research  
Notes: The nursery did not emerge until mid-January due to lack of rain. Heading was delayed by two weeks, so the later maturing lines did not finish well.

#### **Blacksburg, Virginia**

Cooperator: Carl Griffey  
Virginia Tech  
Planted: September 24, 2012  
Fertilizer: 30-60-80 fall (9/21)  
Notes: Strong storms and excessive rain resulted in early lodging. Persistent rain delayed harvest for 10 days. In addition disease epidemics including FHB, stripe rust, and leaf rust severely impacted yields and test weights.

#### **Warsaw, Virginia**

Cooperator: Carl Griffey  
Virginia Tech  
Planted: October 17, 2012  
Harvested: June 22, 2013  
Fertilizer: 30-60-80-5 fall (10/11)  
Notes: FHB index was estimated by accounting for incidence and severity (not rated separately) in visual ratings. FHB % white heads: white heads were predominantly scabby, a few may be due to freeze injury.

#### **Mt. Vernon, Pullman, Walla Walla, Lind, Washington**

Cooperator: Xianming Chen  
USDA-ARS, Wheat Genetics, Quality, Physiology, & Disease Research  
Notes: Adult stripe rust data.

#### **Central Ferry, Pullman, Washington**

Cooperator: Kim Campbell  
USDA-ARS, Wheat Genetics, Quality, Physiology, & Disease Research  
Notes: Stripe rust data.

#### **Oconto, Wisconsin**

Cooperator: Jana Murche  
KWS Cereals USA  
Planted: September 26, 2012  
Fertilizer: none, remnant manure  
Notes: Trial not harvested due to severe winterkilling.





## YIELD (bu/acre)

	Belle Mina		Stuttgart		Quincy		Griffin		Plains		Harrisburg		
	AL	ab	AR	ab	FL	a	GA	ab	GA	ab	IL		
	Glass	rank	Mason	rank	Blount/Barnett	rank	Johnson	rank	Johnson	rank	Murche	rank	
1	AGS 2000	87.8	22	71.3	17	44.3	17	103.5	22	71.0	28	84.5	18
2	Pioneer Brand 26R61	80.3	31	63.4	27	47.8	14	93.2	27	73.5	25	89.0	12
3	USG 3555	91.3	18	74.2	9	38.5	24	118.2	4	98.8	12	80.1	26
4	Jamestown	90.2	19	68.5	22	52.8	8	90.6	29	103.2	10	82.7	20
5	NC08-23089	80.4	30	64.4	24	48.6	12	85.6	31	71.3	27	77.7	28
6	NC08-23324	56.5	32	53.0	32	42.6	20	107.1	20	26.4	32	74.8	31
7	VA10W-119	87.4	23	70.6	19	49.6	11	112.0	11	89.2	17	88.4	13
8	NC08-21273	52.2	33	57.8	31	28.1	29	59.8	33	20.3	33	81.9	23
9	NC09-20765	86.3	24	60.9	29	44.2	18	111.5	13	92.0	15	75.0	30
10	TN1301	95.3	12	78.8	2	31.4	27	107.2	19	100.3	11	82.4	22
11	TN1302	92.5	15	75.2	7	24.3	31	108.7	17	71.7	26	71.9	32
12	TN1303	104.6	1	75.8	6	43.2	19	121.1	3	91.8	16	82.4	21
13	VA07W-415	88.5	21	61.3	28	46.4	15	122.8	1	125.0	1	93.8	5
14	VA10W-123	103.5	4	72.8	11	38.5	25	116.7	5	115.3	5	83.6	19
15	VA09W-110	102.2	6	74.3	8	47.9	13	100.8	24	86.5	20	77.0	29
16	KWS011	84.6	26	52.9	33	23.4	32	82.9	32	59.2	29	98.1	2
17	KWS012	89.3	20	64.0	25	33.8	26	107.5	18	77.6	24	63.9	33
18	KWS013	93.2	14	65.1	23	30.4	28	115.9	6	87.0	19	89.4	11
19	AR00343-5-1	103.2	5	76.9	5	42.3	21	113.7	7	81.2	22	81.3	24
20	AR01040-4-1	103.8	2	87.0	1	59.6	3	121.3	2	87.8	18	96.2	3
21	LA03200E-2	96.2	10	72.8	12	51.0	10	97.0	26	106.6	9	90.5	9
22	LA05038D-105	80.7	29	63.6	26	59.0	4	103.4	23	93.4	14	80.5	25
23	LA05130D-P5	96.0	11	71.6	14	55.2	5	111.4	14	109.7	7	88.4	13
24	LCS19701	96.3	9	78.5	3	39.8	23	112.0	11	79.8	23	93.9	4
25	LCS29817	84.5	28	71.3	16	26.7	30	87.8	30	51.9	30	90.7	8
26	LCS19227	84.6	26	73.5	10	17.8	33	92.7	28	49.7	31	90.3	10
27	GA041052-11E51	93.6	13	68.6	21	54.9	6	100.0	25	116.4	4	77.9	27
28	GA041293-11E54	92.2	16	69.9	20	71.6	1	113.1	9	117.1	3	101.6	1
29	GA041323-11E63	96.4	8	71.8	13	54.8	7	113.4	8	109.1	8	88.3	15
30	GA041293-11LE37	91.6	17	71.6	15	61.7	2	113.1	9	119.8	2	93.3	6
31	MD04W249-11-7	100.7	7	70.7	18	41.3	22	110.0	16	86.1	21	91.6	7
32	MD04W249-11-12	103.6	3	77.3	4	45.2	16	111.2	15	112.1	6	85.2	17
33	MD07W272-11-5	86.2	25	58.0	30	52.1	9	105.8	21	93.7	13	86.2	16
LOCATION MEANS		90.2		69.3		43.9		105.2		87.1		85.2	
LSD (.05)		10.1		8.7		11.0 (0.10)		12.4		16.3		15.27	
CV %		6.9		6.3		15.4		7.3		9.3		10.94	
REPS		3		3		3		3		2		3	
Harvest Plot Size (sq.ft.)		100		70		55		50		50		72.5	

## YIELD (bu/acre)

	Lafayette		Lafayette		Winfield		Lexington		Baton Rouge		Queenstown		
	IN <sup>b</sup>		IN		KS <sup>b</sup>		KY <sup>a</sup>		LA <sup>ab</sup>		MD <sup>ab</sup>		
	Obert	rank	Moreno	rank	Perry	rank	Van Sanford	rank	Harrison	rank	Costa	rank	
1	AGS 2000	53.8	26	30.0	33	31.3	32	76.9	14	87.2	7	70.5	26
2	Pioneer Brand 26R61	39.2	32	56.0	27	51.4	26	68.4	24	84.5	13	57.5	33
3	USG 3555	60.7	19	64.1	21	63.7	6	73.0	19	86.7	9	81.9	12
4	Jamestown	69.3	9	72.6	9	58.3	16	61.8	27	84.9	11	81.6	13
5	NC08-23089	58.7	22	68.7	15	54.3	22	46.2	33	77.4	22	87.0	3
6	NC08-23324	53.6	27	60.2	24	63.1	7	99.6	3	58.9	31	85.3	7
7	VA10W-119	62.7	16	73.9	6	59.1	14	80.8	11	78.1	20	81.1	14
8	NC08-21273	52.5	28	68.6	16	52.5	24	81.2	9	57.5	32	82.2	11
9	NC09-20765	62.6	17	74.2	5	50.3	27	76.0	15	76.9	24	69.4	29
10	TN1301	65.8	13	64.5	20	44.2	30	81.0	10	71.1	27	72.5	19
11	TN1302	59.9	21	69.9	14	63.0	8	74.8	17	84.7	12	72.7	18
12	TN1303	61.9	18	61.2	22	56.0	21	61.3	29	83.0	16	74.3	17
13	VA07W-415	60.0	20	67.6	17	59.7	13	74.9	16	63.6	30	83.3	9
14	VA10W-123	67.5	10	71.6	11	58.2	17	69.3	23	78.6	19	90.7	1
15	VA09W-110	65.3	14	70.4	13	58.8	15	61.6	28	87.3	6	70.8	25
16	KWS011	73.8	5	78.5	3	62.0	10	103.6	2	76.2	26	71.2	23
17	KWS012	71.6	7	81.9	1	49.8	28	71.9	20	67.3	28	79.0	15
18	KWS013	77.6	3	44.1	29	39.4	31	99.4	5	77.5	21	84.8	8
19	AR00343-5-1	73.3	6	74.5	4	53.5	23	77.8	13	76.4	25	71.3	22
20	AR01040-4-1	65.1	15	41.4	30	24.7	33	99.4	4	90.4	4	74.7	16
21	LA03200E-2	55.0	25	72.9	8	70.4	2	65.3	26	92.1	1	71.2	24
22	LA05038D-105	38.4	33	36.4	31	57.4	18	57.8	31	86.4	10	58.6	32
23	LA05130D-P5	55.3	24	47.1	28	56.8	19	74.0	18	83.4	14	69.8	27
24	LCS19701	87.5	1	66.9	18	69.7	3	91.9	8	76.9	23	69.6	28
25	LCS29817	79.2	2	79.0	2	56.8	19	69.7	22	43.3	33	85.8	6
26	LCS19227	75.8	4	30.1	32	47.4	29	79.3	12	65.1	29	85.9	5
27	GA041052-11E51	57.2	23	70.7	12	61.0	12	71.0	21	86.8	8	87.9	2
28	GA041293-11E54	47.3	30	64.6	19	61.8	11	66.8	25	92.0	2	72.1	21
29	GA041323-11E63	48.9	29	57.2	26	67.8	4	58.7	30	91.7	3	67.5	30
30	GA041293-11LE37	44.0	31	59.4	25	62.1	9	55.2	32	88.0	5	63.3	31
31	MD04W249-11-7	66.5	11	71.8	10	70.6	1	98.4	6	80.9	18	86.5	4
32	MD04W249-11-12	71.2	8	73.3	7	63.7	5	112.2	1	83.0	15	82.3	10
33	MD07W272-11-5	66.5	11	60.5	23	51.7	25	95.2	7	82.4	17	72.3	20
LOCATION MEANS		62.1		63.1		56.1		76.8		78.8		76.2	
LSD (.05)		4.9				10.8		20.4		8.6		9.3	
CV %		7.5				9.5		12		5.3		6	
REPS		2		1		2		2		2		2	
Harvest Plot Size (sq.ft.)						50		44		70			

## YIELD (bu/acre)

	Kinston		Portageville		Custar		Knoxville		Farmersville		Blacksburg		
	NC	a	MO	a	OH		TN	a	TX	a	VA	a	
	Murphy	rank	McKendry	rank	Sneller	rank	West	rank	Sutton	rank	Griffey	rank	
1	AGS 2000	76.9	6	61.7	22	52.3	30	12.0	29	41.2	28	62.9	26
2	Pioneer Brand 26R61	52.5	30	68.6	14	61.3	20	24.0	22	45.9	21	64.6	25
3	USG 3555	65.8	19	71.8	8	54.6	26	46.0	15	54.5	10	66.4	21
4	Jamestown	65.6	20	70.2	12	60.6	21	49.0	12	54.9	9	69.5	16
5	NC08-23089	59.1	29	54.6	31	56.4	25	54.0	8	48.3	16	66.8	19
6	NC08-23324	77.6	5	49.3	32	58.4	23	47.0	13	30.5	33	59.0	30
7	VA10W-119	76.1	9	71.5	9	53.1	28	57.0	7	59.8	3	91.5	1
8	NC08-21273	67.6	17	45.6	33	65.7	14	33.0	19	45.2	25	51.4	33
9	NC09-20765	69.6	15	57.9	27	70.3	12	20.0	24	46.8	18	58.7	31
10	TN1301	71.4	14	69.5	13	75.5	5	13.0	28	46.0	20	61.5	28
11	TN1302	62.3	27	54.8	30	75.0	7	4.0	33	38.7	30	65.6	24
12	TN1303	71.8	13	66.9	16	75.4	6	59.0	3	52.2	12	73.2	13
13	VA07W-415	74.6	10	59.6	25	72.3	9	66.0	2	45.6	22	82.7	4
14	VA10W-123	65.1	22	71.1	10	61.7	19	15.0	27	53.6	11	75.1	10
15	VA09W-110	77.8	4	77.9	1	59.6	22	47.0	13	49.9	14	74.8	12
16	KWS011	48.4	32	57.8	28	69.8	13	50.0	11	31.7	32	60.6	29
17	KWS012	76.5	7	61.7	22	65.6	15	5.0	32	46.1	19	53.8	32
18	KWS013	76.3	8	59.6	25	76.3	4	10.0	30	55.4	7	65.8	23
19	AR00343-5-1	52.0	31	65.2	19	72.7	8	26.0	21	48.3	16	75.1	11
20	AR01040-4-1	71.9	12	60.0	24	44.6	32	58.0	5	59.9	2	76.8	8
21	LA03200E-2	64.5	23	76.3	2	43.9	33	20.0	24	45.5	23	78.5	6
22	LA05038D-105	62.6	26	66.1	17	49.1	31	52.0	9	48.4	15	77.8	7
23	LA05130D-P5	63.7	25	62.6	20	58.1	24	51.0	10	51.9	13	67.3	18
24	LCS19701	65.4	21	68.5	15	81.7	2	27.0	20	44.8	26	66.6	20
25	LCS29817	67.2	18	74.1	5	77.4	3	35.0	18	42.9	27	69.7	15
26	LCS19227	28.5	33	66.1	17	87.0	1	59.0	3	34.2	31	62.9	27
27	GA041052-11E51	60.7	28	72.7	6	63.2	17	42.0	16	66.5	1	67.5	17
28	GA041293-11E54	64.3	24	76.1	3	62.9	18	70.0	1	59.6	5	81.3	5
29	GA041323-11E63	82.7	2	70.4	11	53.0	29	41.0	17	40.4	29	70.5	14
30	GA041293-11LE37	94.6	1	76.0	4	71.0	10	58.0	5	59.8	3	84.0	3
31	MD04W249-11-7	74.5	11	62.5	21	70.8	11	23.0	23	45.4	24	76.0	9
32	MD04W249-11-12	81.4	3	72.6	7	64.3	16	17.0	26	56.4	6	89.5	2
33	MD07W272-11-5	68.7	16	56.1	29	53.9	27	6.0	31	55.4	7	66.0	22
LOCATION MEANS		67.8		65.3		64.2		36.2		48.7		70.1	
LSD (.05)		16.3		10.4				23		8.6		15.49	
CV %		12.1		15.6				38.7		13		13.05	
REPS		2		3		1		3				2	
Harvest Plot Size (sq.ft.)		60		55		50		43				45	



## TEST WEIGHT (pounds/bushel)

	Belle Mina AL Glass	Stuttgart AR Mason	Quincy FL Blount/Barnett	Griffin GA Johnson	Plains GA Johnson	
1	AGS 2000	55.9	57.1	50.6	60.0	54.1
2	Pioneer Brand 26R61	56	57.9	52.4	59.6	60.8
3	USG 3555	55.3	57.2	50.6	58.5	57.3
4	Jamestown	57.9	58.8	54.6	60.6	61.7
5	NC08-23089	54.9	57.3	52.0	58.8	58.2
6	NC08-23324	52.0	53.6	49.4	60.7	56.1
7	VA10W-119	56.1	58.0	52.2	59.6	57.8
8	NC08-21273	53.7	56.6	51.7	55.1	54.5
9	NC09-20765	57.2	56.1	52.4	58.9	57.3
10	TN1301	56.3	56.9	52.1	58.9	52.3
11	TN1302	55.5	56.9	50.7	55.9	55.3
12	TN1303	54.6	56.1	50.5	58.2	57.4
13	VA07W-415	54.3	54.9	50.7	59.6	59.1
14	VA10W-123	56.5	57.1	50.3	59.4	57.1
15	VA09W-110	54.6	54.7	50.6	56.9	57.8
16	KWS011	56.5	57.0	49.8	53.6	50.0
17	KWS012	56.3	57.2	47.9	58.7	54.9
18	KWS013	56.2	55.1	47.2	57.8	55.1
19	AR00343-5-1	57.2	56.9	49.7	58.9	55.9
20	AR01040-4-1	55.7	58.2	49.9	58.1	49.7
21	LA03200E-2	57.4	58.4	52.4	61.6	61.1
22	LA05038D-105	55.6	58.1	52.8	60.0	57.5
23	LA05130D-P5	57.0	58.6	53.0	60.4	60.1
24	LCS19701	57.0	56.6	53.0	58.0	49.1
25	LCS29817	57.8	58.6	52.8	58.1	52.6
26	LCS19227	55.8	55.6	43.9	56.5	54.9
27	GA041052-11E51	56.7	56.7	50.3	60.7	59.4
28	GA041293-11E54	57.3	55.5	53.0	61.7	60.0
29	GA041323-11E63	55.5	55.8	51.7	59.8	59.0
30	GA041293-11LE37	56.6	58.0	52.3	62.0	60.2
31	MD04W249-11-7	56.8	58.7	53.5	59.5	59.4
32	MD04W249-11-12	57.2	59.1	54.0	60.1	60.8
33	MD07W272-11-5	57.4	57.6	54.0	62.0	61.6
LOCATION MEANS	56.1	57.0	51.3	59.0	56.9	

## TEST WEIGHT (pounds/bushel)

	Harrisburg IL Murche	Lafayette IN Obert	Lafayette IN Moreno	Winfield KS Perry	Lexington KY Van Sanford	
1	AGS 2000	58.0	57.7	51.7	55.0	53.0
2	Pioneer Brand 26R61	57.6	53.9	54.4	60.3	52.2
3	USG 3555	56.7	57.7	57.0	58.4	54.1
4	Jamestown	58.1	59.6	60.8	59.9	55.7
5	NC08-23089	57.1	55.6	56.6	58.8	53.4
6	NC08-23324	57.4	58.3	56.9	61.7	53.1
7	VA10W-119	57.5	56.2	58.0	59.8	53.2
8	NC08-21273	57.6	56.1	57.2	60.4	49.9
9	NC09-20765	58.6	58.1	58.1	57.5	52.0
10	TN1301	56.2	59.1	57.9	56.0	54.9
11	TN1302	56.4	54.7	54.0	56.8	52.6
12	TN1303	55.6	54.0	52.2	56.2	50.3
13	VA07W-415	56.3	52.8	55.8	57.2	52.0
14	VA10W-123	55.6	57.3	58.1	59.5	55.9
15	VA09W-110	56.4	56.6	57.3	59.0	51.4
16	KWS011	56.7	57.9	57.5	59.9	56.2
17	KWS012	57.2	58.0	58.1	60.5	55.2
18	KWS013	57.6	54.9	53.2	55.0	53.8
19	AR00343-5-1	57.5	58.0	58.6	58.6	56.4
20	AR01040-4-1	56.9	56.0	55.3	55.0	56.1
21	LA03200E-2	57.6	57.7	57.9	61.1	52.8
22	LA05038D-105	58.1	53.9	50.3	58.5	50.9
23	LA05130D-P5	57.4	56.2	55.3	59.7	55.3
24	LCS19701	57.9	59.2	57.1	58.9	55.6
25	LCS29817	58.2	59.9	55.5	57.2	55.2
26	LCS19227	57.9	56.5	51.4	56.3	53.8
27	GA041052-11E51	55.9	57.2	58.9	59.4	52.9
28	GA041293-11E54	57.9	51.2	54.2	60.9	53.0
29	GA041323-11E63	54.5	52.6	52.6	58.3	48.5
30	GA041293-11LE37	57.3	50.2	52.1	59.4	50.1
31	MD04W249-11-7	58.3	58.6	58.0	60.9	57.2
32	MD04W249-11-12	58.3	58.7	57.5	60.5	56.9
33	MD07W272-11-5	58.6	61.5	59.7	61.8	56.2
LOCATION MEANS	57.2	56.5	56.0	58.7	53.6	

## TEST WEIGHT (pounds/bushel)

		Baton Rouge	Queenstown	Kinston	Portageville	Custar
		LA	MD	NC	MO	OH
		Harrison	Costa	Murphy	McKendry	Sneller
1	AGS 2000	58.5	57.6	56.0	57.7	57.4
2	Pioneer Brand 26R61	59.3	60.2	55.9	58.4	55.9
3	USG 3555	58.2	57.2	54.9	57.6	55.4
4	Jamestown	58.9	58.5	59.2	59.3	59.0
5	NC08-23089	56.9	58.2	55.7	54.3	57.0
6	NC08-23324	56.8	59.4	56.2	56.2	55.3
7	VA10W-119	58.4	58.7	56.4	58.8	56.7
8	NC08-21273	59.0	58.7	55.2	56.8	57.4
9	NC09-20765	60.4	58.3	56.7	57.8	57.5
10	TN1301	56.8	58.2	56.2	58.6	57.1
11	TN1302	57.6	56.9	54.7	56.9	56.0
12	TN1303	56.6	55.4	53.9	55.1	54.4
13	VA07W-415	57.3	57.5	54.0	53.7	55.5
14	VA10W-123	58.4	58.4	54.4	57.3	57.0
15	VA09W-110	58.1	57.5	54.0	57.6	57.9
16	KWS011	55.0	57.5	53.9	54.7	56.9
17	KWS012	59.7	57.3	52.4	56.3	57.5
18	KWS013	58.0	57.2	54.7	55.2	55.7
19	AR00343-5-1	59.3	57.9	54.9	58.0	57.7
20	AR01040-4-1	56.7	56.7	60.0	55.4	55.9
21	LA03200E-2	59.9	59.5	55.8	59.8	54.1
22	LA05038D-105	58.9	58.3	55.9	59.1	53.6
23	LA05130D-P5	59.5	59.3	55.0	57.5	58.0
24	LCS19701	56.2	57.6	54.7	58.1	55.7
25	LCS29817	43.4	59.0	56.9	59.2	57.5
26	LCS19227	57.4	57.0	50.2	55.8	57.1
27	GA041052-11E51	58.1	59.0	57.1	58.1	57.9
28	GA041293-11E54	58.5	57.8	57.3	59.1	56.9
29	GA041323-11E63	57.8	56.2	55.6	56.6	53.7
30	GA041293-11LE37	59.5	57.6	56.6	59.8	58.1
31	MD04W249-11-7	60.0	59.6	55.8	59.1	57.5
32	MD04W249-11-12	59.5	58.9	56.1	59.7	57.3
33	MD07W272-11-5	59.9	60.1	56.7	57.8	59.7
LOCATION MEANS		57.8	58.1	55.5	57.4	56.7



## TEST WEIGHT (pounds/bushel)

		Farmersville	Blacksburg	Warsaw	ENTRY MEANS	
		TX	VA	VA	ALL LOCATIONS	rank
		Sutton	Griffey	Griffey		
1	AGS 2000	55.5	52.6	58.6	55.9	22
2	Pioneer Brand 26R61	58.0	53.7	59.0	57.0	10
3	USG 3555	55.0	51.5	58.0	56.1	19
4	Jamestown	60.3	54.4	59.6	58.7	2
5	NC08-23089	57.1	52.7	57.9	56.3	16
6	NC08-23324	52.1	50.5	58.8	55.8	24
7	VA10W-119	58.8	53.8	58.4	57.1	7
8	NC08-21273	56.0	51.0	59.8	55.9	23
9	NC09-20765	57.1	51.8	60.4	57.0	9
10	TN1301	54.9	52.5	59.2	56.3	15
11	TN1302	54.8	54.6	58.1	55.5	27
12	TN1303	54.7	51.3	55.6	54.6	32
13	VA07W-415	53.4	52.1	58.0	55.2	29
14	VA10W-123	56.8	51.6	58.8	56.6	14
15	VA09W-110	54.0	50.8	57.6	55.7	26
16	KWS011	55.0	50.6	58.7	55.4	28
17	KWS012	53.2	52.1	59.2	56.2	18
18	KWS013	55.9	50.0	56.7	55.0	31
19	AR00343-5-1	54.5	54.2	60.0	56.9	12
20	AR01040-4-1	57.4	53.2	57.6	55.8	25
21	LA03200E-2	59.6	53.4	58.2	57.7	5
22	LA05038D-105	58.7	53.0	57.2	56.1	20
23	LA05130D-P5	58.6	52.6	58.6	57.3	6
24	LCS19701	55.2	52.3	59.5	56.2	17
25	LCS29817	56.3	51.8	59.8	56.1	21
26	LCS19227	48.1	51.2	58.9	54.3	33
27	GA041052-11E51	59.2	52.2	58.5	57.1	8
28	GA041293-11E54	58.9	53.3	58.4	56.9	11
29	GA041323-11E63	56.3	51.4	56.2	55.1	30
30	GA041293-11LE37	60.7	53.8	55.6	56.7	13
31	MD04W249-11-7	57.7	54.1	59.1	58.0	4
32	MD04W249-11-12	58.8	54.8	59.5	58.2	3
33	MD07W272-11-5	58.0	54.8	60.3	58.8	1
LOCATION MEANS		56.4	52.5	58.5	56.4	

## HEADING DATE (Julian days)

	Belle Mina	Stuttgart	Quincy	Griffin	Plains	
	AL	AR	FL	GA	GA	
	Glass	Mason	Blount/Barnett	Johnson	Johnson	
1	AGS 2000	111	113	94	103	91
2	Pioneer Brand 26R61	112	115	94	104	100
3	USG 3555	112	113	108	106	103
4	Jamestown	109	107	89	97	90
5	NC08-23089	117	110	89	98	91
6	NC08-23324	114	113	105	107	104
7	VA10W-119	110	110	104	102	102
8	NC08-21273	115	114	112	112	114
9	NC09-20765	115	113	106	109	109
10	TN1301	114	112	117	109	108
11	TN1302	112	113	104	106	103
12	TN1303	114	114	103	105	101
13	VA07W-415	114	112	113	103	109
14	VA10W-123	109	108	109	103	101
15	VA09W-110	112	112	104	106	102
16	KWS011	120	117	121	116	119
17	KWS012	115	115	109	110	108
18	KWS013	112	110	109	105	102
19	AR00343-5-1	115	116	93	107	102
20	AR01040-4-1	115	116	94	105	101
21	LA03200E-2	112	113	94	101	98
22	LA05038D-105	112	111	91	101	99
23	LA05130D-P5	112	113	104	105	102
24	LCS19701	116	113	115	111	110
25	LCS29817	119	117		116	119
26	LCS19227	117	114	113	112	111
27	GA041052-11E51	109	110	91	98	90
28	GA041293-11E54	112	111	93	100	97
29	GA041323-11E63	109	109	97	100	98
30	GA041293-11LE37	112	112	92	103	99
31	MD04W249-11-7	115	114	112	111	109
32	MD04W249-11-12	114	115	110	109	108
33	MD07W272-11-5	112	113	94	104	102
LOCATION MEANS	113.3	112.7	102.6	105.6	103.1	

## HEADING DATE (Julian days)

	Harrisburg IL Murche	Lafayette IN Obert	Lafayette IN Moreno	Lexington KY Van Sanford	Baton Rouge LA Harrison	
1	AGS 2000	125.0	144		129.9	83.8
2	Pioneer Brand 26R61	126.7	145	137	132.9	87.5
3	USG 3555	125.0	146	136	130.3	97.5
4	Jamestown	124.0	141	135	129.9	78.8
5	NC08-23089	124.7	142	136	129.4	79.0
6	NC08-23324	129.0	146	137	132.3	95.0
7	VA10W-119	124.0	146	136	129.4	91.5
8	NC08-21273	127.3	144	136	130.0	100.0
9	NC09-20765	128.0	145	139	132.2	94.0
10	TN1301	127.7	145	139	132.0	99.8
11	TN1302	125.0	146	137	129.5	92.3
12	TN1303	125.0	145	136	130.1	87.0
13	VA07W-415	126.3	146	136	131.1	100.0
14	VA10W-123	123.3	140	136	130.0	94.0
15	VA09W-110	127.3	146	139	130.5	91.5
16	KWS011	131.7	147	138	136.0	103.0
17	KWS012	127.3	144	137	130.3	99.3
18	KWS013	124.0	144	137	127.1	92.0
19	AR00343-5-1	128.0	146	139	134.6	90.0
20	AR01040-4-1	128.3	146	139	135.7	86.8
21	LA03200E-2	125.0	146	139	130.6	85.7
22	LA05038D-105	125.3	146	138	128.9	86.3
23	LA05130D-P5	125.3	146		132.2	93.8
24	LCS19701	125.7	142	136	130.0	102.0
25	LCS29817	130.0	144	136	131.1	110.5
26	LCS19227	129.7	141		129.1	102.8
27	GA041052-11E51	125.0	142	135	129.3	78.8
28	GA041293-11E54	125.7	148	137	129.3	85.8
29	GA041323-11E63	125.0	142	137	129.8	86.8
30	GA041293-11LE37	125.7	145	137	129.0	86.0
31	MD04W249-11-7	125.0	146	138	130.2	98.5
32	MD04W249-11-12	125.0	144	137	130.9	93.5
33	MD07W272-11-5	125.3	146	139	129.8	90.8
LOCATION MEANS		126.2	144.6	137.1	130.7	92.2

## HEADING DATE (Julian days)

	Queenstown MD Costa	Salisbury MD Costa	Raleigh NC Murphy	Custar OH Sneller	Blacksburg VA Griffey	
1	AGS 2000	126.0	131.0	107	145	128.5
2	Pioneer Brand 26R61	126.0	131.5	109	144	132.0
3	USG 3555	125.5	130.5	105	143	129.5
4	Jamestown	123.5	129.5	101	143	128.5
5	NC08-23089	124.0	129.0	101	142	132.0
6	NC08-23324	125.5	131.0	110	144	133.0
7	VA10W-119	124.5	130.5	107	145	130.0
8	NC08-21273	126.0	132.0	110	141	131.5
9	NC09-20765	126.0	131.5	110	144	131.5
10	TN1301	126.0	131.0	108	143	133.0
11	TN1302	126.0	131.0	107	142	131.0
12	TN1303	126.0	132.0	107	142	129.0
13	VA07W-415	125.0	131.0	109	144	134.0
14	VA10W-123	124.0	129.5	105	139	128.0
15	VA09W-110	128.5	131.5	109	145	132.5
16	KWS011	131.0	137.0		143	135.0
17	KWS012	128.0	131.5	111	143	133.0
18	KWS013	124.0	129.0	103	139	127.5
19	AR00343-5-1	131.5	134.5	109	144	133.5
20	AR01040-4-1	131.0	134.5	109	144	135.0
21	LA03200E-2	125.0	131.0	107	145	130.5
22	LA05038D-105	126.0	131.0	106	144	131.0
23	LA05130D-P5	126.0	131.5	106	145	132.0
24	LCS19701	126.0	131.0	109	142	131.5
25	LCS29817	128.0	132.0	115	141	131.0
26	LCS19227	127.0	131.5	114	140	131.5
27	GA041052-11E51	124.0	130.0	103	142	130.5
28	GA041293-11E54	125.0	130.5	105	144	132.0
29	GA041323-11E63	124.0	128.5	103	143	129.5
30	GA041293-11LE37	125.5	130.5	105	143	130.0
31	MD04W249-11-7	127.0	131.5	108	143	132.0
32	MD04W249-11-12	125.5	130.5	107	145	131.5
33	MD07W272-11-5	125.5	130.2	105	143	130.5
LOCATION MEANS	126.1	131.2	107.2	143.0	131.3	

## HEADING DATE (Julian days)

		Warsaw VA Griffey	ENTRY MEANS ALL LOCATIONS	rank
1	AGS 2000	116.5	116.6	4
2	Pioneer Brand 26R61	118.0	119.7	16
3	USG 3555	116.0	120.4	18
4	Jamestown	110.5	114.8	1
5	NC08-23089	112.5	116.0	3
6	NC08-23324	117.5	121.5	22
7	VA10W-119	115.0	119.2	13
8	NC08-21273	117.5	122.6	31
9	NC09-20765	118.0	121.9	25
10	TN1301	117.0	122.6	30
11	TN1302	115.0	120.0	17
12	TN1303	118.0	119.6	15
13	VA07W-415	116.5	121.9	24
14	VA10W-123	112.5	118.2	8
15	VA09W-110	116.0	120.8	19
16	KWS011	121.5	127.7	33
17	KWS012	117.5	122.4	28
18	KWS013	113.0	118.6	10
19	AR00343-5-1	119.0	121.4	21
20	AR01040-4-1	118.5	121.2	20
21	LA03200E-2	116.5	118.7	11
22	LA05038D-105	115.0	118.2	9
23	LA05130D-P5	117.0	119.4	14
24	LCS19701	119.0	122.5	29
25	LCS29817	119.0	125.9	32
26	LCS19227	118.0	122.1	26
27	GA041052-11E51	112.5	115.6	2
28	GA041293-11E54	116.0	118.2	7
29	GA041323-11E63	111.0	117.0	5
30	GA041293-11LE37	115.5	118.1	6
31	MD04W249-11-7	118.0	122.4	27
32	MD04W249-11-12	117.5	121.5	23
33	MD07W272-11-5	116.5	119.2	12
LOCATION MEANS		116.3	120.2	













































































ADVANCED NURSERY EVALUATION  
FOR SOFT WHEAT MILLING AND BAKING QUALITY  
2013 CROP

Data Transferred from Quality Data Sheet													
Lab Number	Entry Number	ENTRY	Test Weight (LB/BU)	Whole Grain Protein (at 12%)	Whole Grain Hardness (0-100)	Flour Yield (%)	Softness Equivalent (%)	Flour Protein (at 14%)	Lactic Acid SRC (%)	Sodium Carbonate SRC (%)	Cookie Diameter (cm)	Top Grade (0-9)	
1351041	1	AGS 2000	60.76	10.54	19.73	71.30	60.60	8.27	102.70	69.20	17.62	4	
1351042	2	Pioneer Brand 26R61	61.19	11.10	27.80	68.38	56.50	8.69	112.13	67.68	17.80	3	
1351043	3	USG 3555	58.94	10.42	21.19	67.70	58.00	8.18	113.37	73.52	17.55	2	
1351044	4	Jamestown	61.29	11.04	18.18	68.00	60.49	8.48	121.78	71.28	17.19	3	
		Average	60.55	10.78	21.73	68.85	58.89	8.41	112.50	70.42	17.54	3.00	
		Standard Errors Used for Grading*				0.964	2.088	0.477	2.420	0.593	0.363		