ADVANCED NURSERY EVALUATION

FOR SOFT WHEAT MILLING AND BAKING QUALITY

2009 CROP

Clay Sneller - Ohio State University

Wooster, OH

UEWWN

STD = Branson

LAB NO.	ENTRY NO.	ENTRY	MILLING QUALITY SCORE		BAKING QUALITY SCORE		SOFT. EQUIV. SCORE			MICRO T.W. LB/BU		FLOUR YIELD %		SOFT. EQUIV. %		FLOUR PROT. %		LACTIC ACID SRC		SUCROSE SRC %		COOKIE DIAM. CM.		TOP GR.
****	STD=	Branson	64.36	C	55.00	D	74.57	B		61.29		71.35		61.54		8.29		109.47		88.71		18.88		7.00
920799	1	ROANE	51.8	D	30.5	F	63.9	C		63.7		68.8	Q	57.8	*	8.53		113.8		97.8		18.14	Q	6
920800	2	INW0411	59.9	D	39.7	F	57.6	D		60.6		70.5	*	55.6	*	8.91		95.2		97.7		18.42	*	6
920801	3	BRANSON	64.4	C	55.0	D	74.6	B		61.3		71.4		61.5		8.29		109.5		88.7		18.88		7
920802	4	BESS	55.0	D	36.9	F	46.1	E		62.6		69.5	Q	51.6	Q	9.12	*	96.7		96.8		18.33	Q	6
920803	5	LA01*425	56.7	D	49.6	E	65.2	C		63.2		69.8	*	58.2		8.36		100.0		95.8		18.71		5
920804	6	IL02-19463	57.4	D	34.8	F	63.1	C		62.7		70.0	*	57.5	*	9.27	*	111.8		97.7		18.27	Q	4
920805	7	B030543	63.8	C	60.8	C	55.9	D		63.1		71.2		55.0	*	8.30		99.4		93.5		19.05		7
920806	8	KY97C-0321-02-01	64.5	C	42.1	E	60.4	C		61.1		71.4		56.6	*	8.43		109.6		93.9		18.49	*	5
920807	9	KY97C-0519-04-07	62.7	C	46.9	E	67.7	C		60.5		71.0		59.1		7.83		109.4		91.5		18.63		5
920808	10	KY97C-0508-01-01A-1	52.7	D	50.7	D	63.1	C		62.3		69.0	Q	57.5	*	8.48		123.0		95.2		18.75		6
920809	11	IL04-8445	51.9	D	43.9	E	63.1	C		62.8		68.9	Q	57.5	*	7.99		118.5		99.7		18.54	*	6
920810	12	IL04-11003	69.9	C	47.1	E	66.2	C		63.2		72.5		58.6		8.17		115.2		90.8		18.64		7
920811	13	OH04-264-58	62.5	C	24.5	F	64.5	C		59.6	*	71.0		58.0	*	8.26		131.7		103.1		17.96	Q	5
920812	14	OH04-268-39	57.1	D	53.8	D	70.9	B		61.5		69.9	*	60.3		8.32		112.9		94.6		18.84		7
920813	15	OH05-248-38	55.8	D	25.4	F	49.6	E		62.1		69.6	Q	52.8	Q	8.57		101.1		96.0		17.99	Q	5
920814	16	MD00W53-07-1	41.0	E	21.6	F	30.3	F		62.6		66.7	Q	46.0	Q	10.03	Q	92.8		103.9		17.87	Q	4
920815	17	MD01W233-07-1	57.2	D	17.7	F	47.4	E		63.0		69.9	*	52.0	Q	9.36	*	98.5		95.1		17.76	Q	6
920816	18	G89209	67.8	C	58.5	D	68.4	C		62.3		72.0		59.4		8.30		98.3		91.9		18.98		6
920817	19	G89201	62.2	C	48.1	E	71.3	B		61.2		70.9		60.4		9.44	*	92.4		91.1		18.67		7
920818	20	G89222	47.3	E	45.8	E	60.9	C		61.0		67.9	Q	56.8	*	8.16		94.8		98.3		18.60	*	6
920819	21	M05-1172	65.7	C	50.2	D	62.8	C		59.8	*	71.6		57.4	*	8.10		108.9		95.1		18.73		7
920820	22	M05-1526	57.9	D	49.6	E	55.4	D		61.2		70.1	*	54.8	Q	9.13	*	87.5		98.5		18.71		5
920821	23	M05*1589	53.8	D	38.0	F	67.5	C		60.9		69.3	Q	59.1		8.08		107.0		94.8		18.36	Q	7
920822	24	B040798	69.8	C	61.8	C	72.2	B		60.0	*	72.4		60.7		8.54		110.8		90.3		19.08		5
920823	25	M05-1531	59.4	D	44.1	E	57.4	D		61.5		70.4	*	55.5	*	9.25	*	93.1		94.2		18.55	*	4
920824	26	P.99751RA1-6-3-94	46.7	E	43.0	E	54.3	D		61.6		67.8	Q	54.4	Q	9.17	*	101.4		98.1		18.52	*	4
920825	27	P.02444A1-23-1	55.0	D	47.2	E	58.0	D		60.2		69.5	Q	55.7	*	8.45		99.6		96.3		18.64		6

2009 Crop
Micro Milling and Baking Evaluation
Set 2009 M07

2009 Northern Uniform Winter Wheat Scab Nursery
Herb Ohm, Purdue University
Entries # 910553 - 910612

A total of 60 samples were grown by Purdue University in West Lafayette, IN. The standard quality data was compared to the "historical average" for the cultivar Freedom, and quality scores for all entries are adjusted to this average. Of the 831 cultivars in the SWQL database of Allis-milled cultivars, Freedom ranks 593rd for Milling Score based on data from 11 millings. The following table compares the checks, Truman, Freedom, and Ernie, with its "historical data" from the Micro Milling databases. We have coded in blue text the values for the check that are within two standard deviations of the mean of the previous observations in the micro database for that cultivar. Values in black are outside of the normal range observed for the check cultivar.

Pre-harvest sprouting was present within this nursery, especially within the samples Ernie and B0390207. A significant number of the samples had FHB infected kernels along with weathering. All samples were aspirated to remove FHB affected kernels. The lower than average test weights indicate weathering. There were two samples that were less than 80g, MD02W81-08-2 and RCUOGTR34, thus a test weight was unavailable. An increase in sucrose SRC value was present for the three checks. Due to the relatively large sucrose SRC, Truman, Freedom, and Ernie also had a lower than average baking quality score suggesting that for this nursery baking scores may be generally lower than expected. Samples ACF12004 and the five Nebraska entries, 910567 – 910571, have hard wheat profiles and should be evaluated as such for quality. The three checks ranked correctly against the database so the results for the breeding lines should be predictive of future performance. Therefore, we expect the results of the evaluations to be predictive of future performance of these breeding lines, if released as cultivars.

2009 NUWWSN

ENTRY	MILLING QUALITY SCORE	BAKING QUALITY SCORE	SOFT. EQUIV. SCORE	TEST WT. LB/BU	ADJ. YIELD %	SOFT. EQUIV. %	FLOUR PROT. %	LACTIC ACID SRC	SUCROSE SRC %
Nursery Average	67.38	47.53	58.74	61.45	68.67	54.21	9.02	90.73	89.78
Allis Database - Freedom	61.43	54.53	64.83	60.20	76.90		8.20	86.00	
Truman	64.53	55.03	64.69	60.72	68.10	56.29	8.51	86.75	89.09
Truman - Average	62.42	57.34	64.69	61.43	68.94	55.62	8.61	85.85	83.57
Truman - Standard Deviation	3.89	16.77	5.65	0.67	1.11	3.20	0.96	5.60	4.83
Freedom	61.43	54.53	64.83	59.23	67.48	56.34	8.52	80.35	89.32
Freedom - Average	61.81	64.39	61.41	59.74	69.13	53.82	8.61	78.69	81.29
Freedom - Standard Deviation	6.35	15.44	5.43	0.88	1.21	2.07	0.47	5.00	2.16
Ernie	66.05	51.07	56.71	60.50	68.40	53.50	8.37	80.59	89.11
Ernie - Average	55.77	65.16	68.14	60.25	68.25	54.86	8.86	88.34	84.74
Ernie - Standard Deviation	4.10	14.44	10.27	1.65	0.83	2.48	0.71	11.27	3.86

Conditional formatting set:

Blue = values less than two standard deviations from the mean of the database average

Black = values greater than two standard deviations from the mean of the database average

Comments from Ed Souza

The Northern Uniform Winter Wheat Scab Nursery was provided to the SWQL by the Purdue University Wheat Breeding Program. Thanks to Herb Ohm and his team for providing the material for this evaluation.

When taken as a whole, the check genotypes had flour yields that were less than normally expected. However, the milling yield was within the normal range for the checks based on previous evaluations. In most nurseries, the 67% flour extraction is a common cut-off level, with breeding lines have less flour yield being classed as poor milling wheat genotypes. Freedom milled poorer than average in this set. Even though it was within the expected range for the cultivar, it was at the extreme low end of its performance particularly relative to the other checks. Therefore, lines with flour yield less than Freedom likely are poor milling yield genotypes. After milling yield, the next most heritable trait we evaluate is softness equivalent. As noted above, the nursery included several true hard wheat lines. All of the other breeding lines in this nursery are likely truly soft wheat genotypes. However some are more coarse milling than necessary and selecting toward larger values for softness equivalent (particularly above 52%) will identify lines with better utility for a wider range of soft wheat products, particularly cakes.

Selecting sequentially genotypes in the nursery based on milling yield, softness equivalent, and sucrose SRC will identify lines with above average quality for a wide range of applications. Using those criteria, the best quality lines in the nursery were P053A1-6-7, NY03179FHB-10, NY03189FHB-10, NY03179FHB-12, NYW103-102-9103, IL04-7874, 03M1539#031, and VA07W-600. Most of the lines in the nursery were relatively weak gluten as measured by lactic acid SRC. Three exceptions were KY00C-2567-01, OH04-264-58 and VA07W-672. These were significantly stronger gluten than the check cultivars in this trial.

Please contact me if you have questions concerning this trial.

Best regards,
Edward Souza

EARLY GENERATION SCREENING EVALUATION
FOR SOFT WHEAT MILLING AND BAKING QUALITY
2009 CROP

Herb Ohm - Purdue University
West Lafyette, IN
NUWWSN

STANDARD = Freedom

SAMPLE NO.	ENTRY NO.	ENTRY	MILLING QUALITY SCORE		BAKING QUALITY SCORE		SOFT. EQUIV. SCORE			TEST WT. LB/BU		ADJ. YIELD %		SOFT. EQUIV. %		FLOUR PROT. %		LACTIC ACID SRC		SUCROSE SRC %
*	STD =	Freedom	61.43	C	54.53	D	64.83	C		59.23		67.48		56.34		8.52		80.35		89.32
910553	211	ERNIE	66.1	C	51.1	D	56.7	D		60.5		68.4		53.5		8.37		80.6		89.1
910554	212	TRUMAN	64.5	C	55.0	D	64.7	C		60.7		68.1		56.3		8.51		86.7		89.1
910555	213	FREEDOM	61.4	C	54.5	D	64.8	C		59.2		67.5		56.3		8.52		80.4		89.3
910556	214	PIONEER 24R45	58.2	D	48.1	E	67.8	C		60.6		66.8		57.4		8.88		81.0		92.1
910557	215	P03615A1-4-4	53.5	D	39.1	F	61.4	C		61.2		65.9	Q	55.1		9.50	*	66.0		93.0
910558	216	P04704A1-2-1-1	71.9	B	52.5	D	59.2	D		61.0		69.6		54.4		8.69		76.8		88.5
910559	217	P053A1-6-7	82.7	A	64.9	C	65.9	C		62.2		71.7		56.7		7.71		88.2		86.8
910560	218	P05377A1-7-12	71.2	B	46.0	E	70.7	B		62.5		69.4		58.4		9.50	*	84.4		92.4
910561	219	P0128A1-22-22	56.5	D	51.9	D	59.3	D		60.9		66.5	*	54.4		9.38	*	86.9		87.3
910562	220	MOCHA	67.5	C	59.8	D	69.5	C		61.3		68.7		58.0		8.83		92.8		87.5
910563	221	SHAVER	63.2	C	52.9	D	64.3	C		61.4		67.8		56.2		8.71		101.6		89.5
910564	222	RUBIN	66.0	C	36.8	F	51.6	D		61.5		68.4		51.7	*	10.41	Q	70.3		89.8
910565	223	ARENA	61.3	C	36.4	F	63.3	C		61.6		67.5		55.8		9.32		96.8		95.1
910566	224	CANON	54.3	D	22.1	F	36.4	F		61.3		66.1	*	46.4	Q	9.34		97.3		94.5
910567	225	NE06469	74.7	B	25.1	F	26.8	F		61.6		70.1		43.0	Q	9.41	*	96.6		90.8
910568	226	NI04420	70.7	B	32.6	F	30.4	F		62.8		69.3		44.3	Q	8.62		96.2		90.1
910569	227	NI04427	72.3	B	13.8	F	17.4	F		64.0		69.6		39.7	Q	9.54	*	89.0		93.0
910570	228	NE05459	79.1	B	36.5	F	17.2	F		63.7		71.0		39.7	Q	9.36	*	92.3		83.6
910571	229	NE06471	79.6	B	18.5	F	20.1	F		63.0		71.1		40.7	Q	10.27	Q	95.9		90.2
910572	230	NY03179FHB-10	77.3	B	75.6	B	78.8	B		60.0		70.6		61.2		8.17		88.7		84.4
910573	231	NY03189FHB-10	73.7	B	78.8	B	83.6	A		59.1		69.9		62.9		8.18		95.2		84.2
910574	232	NY03179FHB-12	73.9	B	77.8	B	92.2	A		57.4	*	70.0		65.9		7.48		94.8		88.2
910575	233	NYW103-21-9183	64.8	C	52.7	D	81.2	A		61.8		68.2		62.1		9.70	*	96.3		91.7
910576	234	NYW103-102-9103	69.3	C	63.8	C	77.8	B		59.0		69.1		60.9		9.33		86.5		86.8
910577	235	IL02-18228	63.6	C	33.7	F	40.9	E		63.7		67.9		48.0	Q	10.04	*	88.3		89.2
910578	236	IL04-7874	81.0	A	72.8	B	74.4	B		61.3		71.4		59.7		8.37		102.3		84.1
910579	237	IL04-7842	75.2	B	63.6	C	65.8	C		60.9		70.2		56.7		9.14		97.7		84.4
910580	238	IL04-10721	64.1	C	61.7	C	66.3	C		61.7		68.0		56.9		8.48		95.2		86.7
910581	239	IL04-10741	69.2	C	66.3	C	57.7	D		63.8		69.0		53.9		8.74		88.3		82.1

EARLY GENERATION SCREENING EVALUATION
FOR SOFT WHEAT MILLING AND BAKING QUALITY
2009 CROP

Herb Ohm - Purdue University
West Lafayette, IN
NUWWSN

STANDARD = Freedom

SAMPLE NO.	ENTRY NO.	ENTRY	MILLING QUALITY SCORE		BAKING QUALITY SCORE		SOFT. EQUIV. SCORE			TEST WT. LB/BU		ADJ. YIELD %		SOFT. EQUIV. %		FLOUR PROT. %		LACTIC ACID SRC		SUCROSE SRC %
*	STD =	Freedom	61.43	C	54.53	D	64.83	C		59.23		67.48		56.34		8.52		80.35		89.32
910582	240	MD02W81-08-2	57.8	D	43.8	E	49.0	E			Q	66.8		50.8	*	10.20	Q	80.0		86.6
910583	241	MD02W81-08-4	59.7	D	17.7	F	21.9	F		60.3		67.1		41.3	Q	10.45	Q	70.1		90.6
910584	242	ACF213003B	68.8	C	48.1	E	68.0	C		59.9		68.9		57.4		9.37	*	79.3		91.1
910585	243	ACF126103	69.0	C	47.1	E	67.4	C		60.2		69.0		57.2		9.51	*	78.9		91.1
910586	244	ACF12004	69.0	C	10.4	F	10.3	F		62.4		69.0		37.2	Q	10.10	*	97.0		91.6
910587	245	RCUOGTR34	66.5	C	41.7	E	44.5	E			Q	68.5		49.2	Q	10.91	Q	82.6		84.9
910588	246	RCUOGTR35	62.3	C	41.7	E	57.9	D		61.2		67.6		53.9		9.39	*	85.0		91.3
910589	247	M05-1531	67.7	C	42.5	E	60.3	C		60.9		68.7		54.8		8.85		83.6		92.7
910590	248	B0390207	61.6	C	41.8	E	60.6	C		63.4		67.5		54.9		8.82		94.2		93.1
910591	249	03M1539#031	79.0	B	66.4	C	79.0	B		60.7		71.0		61.3		8.44		99.6		87.8
910592	250	03M1599#0007	74.6	B	58.1	D	70.4	B		62.5		70.1		58.3		8.12		95.7		90.0
910593	251	MO050101	66.4	C	43.1	E	54.7	D		62.7		68.5		52.8	*	8.66		87.3		91.4
910594	252	MO050921	69.8	C	53.7	D	69.4	C		59.2		69.2		57.9		8.89		92.0		90.0
910595	253	MO041020	67.2	C	56.9	D	61.8	C		61.3		68.6		55.3		9.06		82.8		86.5
910596	254	MO050219	63.4	C	32.7	F	62.0	C		63.6		67.9		55.4		8.91		95.4		97.2
910597	255	MO050144	61.9	C	32.0	F	61.5	C		62.9		67.6		55.2		8.20		95.9		98.8
910598	256	KY00C-2059-19	63.4	C	41.7	E	73.0	B		61.0		67.9		59.2		8.57		99.4		96.7
910599	257	KY00C-2515-02	56.5	D	46.5	E	55.9	D		60.8		66.5	*	53.2	*	9.08		82.4		89.4
910600	258	KY00C-2059-24	68.3	C	44.8	E	70.8	B		61.8		68.8		58.4		8.51		91.9		95.0
910601	259	KY00C-2567-01	62.3	C	41.2	E	59.0	D		62.4		67.7		54.3		9.71	*	108.1		91.1
910602	260	KY00C-2143-08	67.1	C	37.3	F	41.4	E		62.8		68.6		48.1	Q	9.32		79.2		89.3
910603	261	MSU LINE E6003	66.8	C	57.0	D	58.4	D		61.2		68.6		54.1		9.73	*	101.2		84.2
910604	262	MSU LINE E7035R	59.2	D	55.6	D	68.3	C		60.6		67.0		57.5		8.80		84.9		89.1
910605	263	OH04-264-58	67.7	C	38.6	F	67.3	C		58.9		68.7		57.2		9.29		118.1		95.2
910606	264	OH04-264-58	67.5	C	49.6	E	78.7	B		61.1		68.7		61.2		8.49		104.1		94.9
910607	265	OH05-248-38	66.5	C	51.6	D	57.4	D		61.0		68.5		53.7		8.37		93.1		89.0
910608	266	VA07W-580	67.7	C	45.8	E	56.7	D		62.3		68.7		53.5		8.17		98.7		91.8
910609	267	VA07W-600	72.4	B	65.6	C	73.0	B		61.5		69.7		59.2		8.30		100.2		87.0
910610	268	VA07W-672	73.3	B	58.6	D	62.2	C		63.0		69.9		55.4		8.56		107.7		86.8
910611	269	VA06W-558	64.4	C	43.5	E	55.3	D		63.2		68.1		53.0	*	8.65		90.8		91.4
910612	270	VA06W-615	67.9	C	52.5	D	61.7	C		61.3		68.8		55.3		9.26		91.2		87.9
		average	67.38		47.53		58.74			61.45		68.67		54.21		9.02		90.73		89.78

EARLY GENERATION SCREENING EVALUATION
FOR SOFT WHEAT MILLING AND BAKING QUALITY
2009 CROP

Herb Ohm - Purdue University
West Lafyette, IN
NUWWSN

SAMPLE NO.	ENTRY NO.	ENTRY	FHB (0-3)	WEATHERING (Yes/No)	SPROUTING (0-3)	BLACK POINT (0-3)	SHRIVELING AFTER CLEANING (0-3)	COLOR	COMMENTS
910553	211	ERNIE					1		
910554	212	TRUMAN					1		
910555	213	FREEDOM					2		
910556	214	PIONEER 24R45					1-2		
910557	215	P03615A1-4-4					1		
910558	216	P04704A1-2-1-1					1		
910559	217	P053A1-6-7					1		
910560	218	P05377A1-7-12					1?		
910561	219	P0128A1-22-22					2		
910562	220	MOCHA					2		
910563	221	SHAVER					1-2		
910564	222	RUBIN					2		
910565	223	ARENA					1		
910566	224	CANON					1		
910567	225	NE06469					2		
910568	226	NI04420					2		
910569	227	NI04427					2		
910570	228	NE05459					1		
910571	229	NE06471					1		
910572	230	NY03179FHB-10					1		white
910573	231	NY03189FHB-10					1-2		
910574	232	NY03179FHB-12					1		
910575	233	NYW103-21-9183					1		
910576	234	NYW103-102-9103					1		
910577	235	IL02-18228					1		
910578	236	IL04-7874					1		
910579	237	IL04-7842					1-2		
910580	238	IL04-10721					1-2		
910581	239	IL04-10741					1		
910582	240	MD02W81-08-2					1		
910583	241	MD02W81-08-4					1		

GRAIN CONDITION SCALE

FHB, SPROUTING and BLACK POINT

0	None
1	up to 10%
2	10% to 40%
3	above 40%

SHRIVELING

0	None
1	Some
2	Moderate
3	Heavy

2009M07 Ohm NUWWSN

Scab	Weathering	Sprouting
Yes	Yes	Yes
90%	5%	910553
moderate	very slight	910590

Moisture	Comments
12.47%	Fairly good shape over all, few white wheats

EARLY GENERATION SCREENING EVALUATION
FOR SOFT WHEAT MILLING AND BAKING QUALITY
2009 CROP

Herb Ohm - Purdue University
West Lafyette, IN
NUWWSN

SAMPLE NO.	ENTRY NO.	ENTRY	FHB	WEATHERING	SPROUTING	BLACK POINT	SHRIVELING AFTER CLEANING	COLOR	COMMENTS
			(0-3)	(Yes/No)	(0-3)	(0-3)	(0-3)		
910584	242	ACF213003B					1-2		
910585	243	ACF126103					1-2		
910586	244	ACF12004					2		
910587	245	RCUOGTR34					1?		
910588	246	RCUOGTR35					1		
910589	247	M05-1531					2		
910590	248	B0390207					1		
910591	249	03M1539#031					1?		
910592	250	03M1599#0007					1-2		
910593	251	MO050101					1		
910594	252	MO050921					1		
910595	253	MO041020					1		
910596	254	MO050219					1		
910597	255	MO050144					1		
910598	256	KY00C-2059-19					1		
910599	257	KY00C-2515-02					2		
910600	258	KY00C-2059-24					1-2		
910601	259	KY00C-2567-01					2		
910602	260	KY00C-2143-08					1		
910603	261	MSU LINE E6003					0		
910604	262	MSU LINE E7035R					1		
910605	263	OH04-264-58					1		
910606	264	OH04-264-58					1		
910607	265	OH05-248-38					1		
910608	266	VA07W-580					1		
910609	267	VA07W-600					1		
910610	268	VA07W-672					1		
910611	269	VA06W-558					1		
910612	270	VA06W-615					1		

GRAIN CONDITION SCALE

FHB, SPROUTING and BLACK POINT

0	None
1	up to 10%
2	10% to 40%
3	above 40%

SHRIVELING

0	None
1	Some
2	Moderate
3	Heavy

EARLY GENERATION SCREENING
EVALUATION SUMMARY
2009 CROP

Herb Ohm - Purdue University
West Lafyette, IN
NUWWSN

		STD.		AVG.	
		DATA		DATA	
MILLING QUALITY SCORE		61.43	C	67.38	
BAKING QUALITY SCORE		54.53	D	47.53	
SE SCORE		64.83	C	58.74	

		STD.		AVG.		ADJ.		NOTATION		
		DATA		DATA		L.S.D.		BEGINS		
								*		Q
TEST WEIGHT		59.23		61.45		1.15		58.08		56.94
FLOUR YIELD		67.48		68.67		0.73		66.75		66.03
SOFTNESS EQUIV.		56.34		54.21		3.03		53.31		50.28
FLOUR PROTEIN		8.52		9.02		0.84		9.36		10.19
SUCROSE SRC		89.32		89.78		3.93				
LACTIC ACID SRC		80.35		90.73		3.54				

		A		B		C		D		E		F	TOTAL
MILLING SCORE		2		15		35		8		0		0	
BAKING SCORE		0		4		7		16		17		16	60
SOFTNESS EQUIV. SCORE		3		10		22		13		4		8	

EARLY GENERATION SCREENING EVALUATION
FOR SOFT WHEAT MILLING AND BAKING QUALITY
2009 Crop

Herb Ohm - Purdue University
West Lafayette, IN
NUWWSN

ENTRY	MILLING QUALITY SCORE	BAKING QUALITY SCORE	SOFT. EQUIV. SCORE	TEST WT. LB/BU	ADJ. YIELD %	SOFT. EQUIV. %	FLOUR PROT. %	LACTIC ACID SRC	SUCROSE SRC %
Nursery Average	67.38	47.53	58.74	61.45	68.67	54.21	9.02	90.73	89.78
Allis Database - Freedom	61.43	54.53	64.83	60.20	76.90		8.20	86.00	
Truman	64.53	55.03	64.69	60.72	68.10	56.29	8.51	86.75	89.09
Truman - Average	62.42	57.34	64.69	61.43	68.94	55.62	8.61	85.85	83.57
Truman - Standard Deviation	3.89	16.77	5.65	0.67	1.11	3.20	0.96	5.60	4.83
Freedom	61.43	54.53	64.83	59.23	67.48	56.34	8.52	80.35	89.32
Freedom - Average	61.81	64.39	61.41	59.74	69.13	53.82	8.61	78.69	81.29
Freedom - Standard Deviation	6.35	15.44	5.43	0.88	1.21	2.07	0.47	5.00	2.16
Ernie	66.05	51.07	56.71	60.50	68.40	53.50	8.37	80.59	89.11
Ernie - Average	55.77	65.16	68.14	60.25	68.25	54.86	8.86	88.34	84.74
Ernie - Standard Deviation	4.10	14.44	10.27	1.65	0.83	2.48	0.71	11.27	3.86

Conditional formatting set:

Blue = values less than two standard deviations from the mean of the database average

Black = values greater than two standard deviations from the mean of the database average

EARLY GENERATION SCREENING EVALUATION
FOR SOFT WHEAT MILLING AND BAKING QUALITY
2009 CROP

Carl Griffey - Virginia Tech
Warsaw, VA
2009 SUFHB Scab nursery

STANDARD = Ernie

SAMPLE NO.	ENTRY NO.	ENTRY	MILLING QUALITY SCORE		BAKING QUALITY SCORE		SOFT. EQUIV. SCORE			TEST WT. LB/BU		ADJ. YIELD %		SOFT. EQUIV. %		FLOUR PROT. %		LACTIC ACID SRC		SUCROSE SRC %
*	STD =	Ernie	54.63	D	75.83	B	75.71	B		56.23		66.68		54.76		8.82		85.87		86.41
910481	1	ERNIE	54.6	D	75.8	B	75.7	B		56.2		66.7		54.8		8.82		85.9		86.4
910482	2	COKER 9835	60.9	C	69.7	C	104.3	A			Q	67.9		64.8		8.69		99.2		96.3
910483	3	BESS	58.8	D	66.0	C	88.8	A			Q	67.5		59.3		9.09		88.0		93.3
910484	4	JAMESTOWN	65.7	C	63.5	C	84.6	A		61.0		68.9		57.8		8.62		107.0		94.3
910485	5	AR 97002-2-1	64.3	C	88.9	A	86.6	A			Q	68.6		58.6		8.55		83.7		84.0
910486	6	AR99039-5-2	55.4	D	69.0	C	95.4	A			Q	66.8		61.6		9.06		96.0		93.7
910487	7	AR 99263-7-1	60.5	C	77.3	B	88.4	A			Q	67.9		59.2		9.30		102.6		87.9
910488	8	VA05W-510	66.3	C	82.4	A	84.7	A		60.2		69.0		57.9		8.65		99.1		86.2
910489	9	B030543	71.7	B	83.8	A	83.8	A		60.3		70.1		57.6		8.13		92.8		86.4
910490	10	LA01164D-94-2	82.5	A	70.4	B	75.0	B			Q	72.2		54.5		9.36		80.9		87.5
910491	11	LA01162D-131-8	76.1	B	82.9	A	72.5	B		58.9		71.0		53.6		9.22		89.3		81.8
910492	12	LA01162D-136-8	80.7	A	64.1	C	73.1	B		57.9		71.9		53.9		9.56		80.6		89.3
910493	13	GA 031454-DH7	79.6	B	68.0	C	68.5	C		59.4		71.7		52.2		10.23	*	86.1		85.1
910494	14	GA 031307-DH14	66.6	C	60.3	C	65.7	C		61.5		69.1		51.2	*	9.71	*	93.9		88.8
910495	15	NC05-21090	58.4	D	61.6	C	87.0	A		59.2		67.4		58.7		9.92	*	109.7		93.0
910496	16	AR 99254-7-1	77.0	B	70.9	B	74.5	B		58.6		71.1		54.3		9.93	*	96.4		85.9
910497	17	AR 99054-4-1	65.4	C	67.8	C	88.6	A		58.3		68.8		59.3		9.62		84.2		91.3
910498	18	AR 99071-7-2	53.5	D	53.2	D	95.9	A		59.2		66.5		61.8		9.55		109.6		99.5
910499	19	MD02W81-08-6	52.6	D	62.6	C	85.5	A			Q	66.3		58.2		9.92	*	80.8		92.2
910500	20	MD01W255-08-1	66.1	C	57.2	D	78.8	B		57.8		69.0		55.8		9.92	*	88.6		92.9
910501	21	M05-1531	65.1	C	65.6	C	90.8	A			Q	68.8		60.0		9.15		91.9		93.8
910502	22	B0390207	55.5	D	32.2	F	80.6	A		59.5		66.8		56.5		9.93	*	89.5		104.0
910503	23	03M1539#031	76.1	B	86.7	A	118.5	A		54.4	*	71.0		69.7		8.52		113.9		92.8
910504	24	03M1599#0007	71.5	B	81.9	A	100.6	A			Q	70.1		63.5		8.33		105.9		90.9
910505	25	MH06-2370	51.8	D	47.4	E	94.3	A		58.9		66.1		61.3		8.59		94.7		103.6
910506	26	ML07*7571	63.6	C	75.5	B	105.5	A			Q	68.5		65.2		8.81		101.5		93.9
910507	27	ML07-7758	51.0	D	58.4	D	75.2	B		59.3		65.9	*	54.6		8.91		85.4		93.6
910508	28	VA04W-90	60.4	C	58.6	D	85.5	A		59.8		67.8		58.2		9.55		106.7		94.7
910509	29	VA05W-534	65.2	C	73.4	B	87.7	A		58.7		68.8		59.0		9.18		94.9		89.7

EARLY GENERATION SCREENING EVALUATION
FOR SOFT WHEAT MILLING AND BAKING QUALITY
2009 CROP

Carl Griffey - Virginia Tech
Warsaw, VA
2009 SUFHB Scab nursery

STANDARD = Ernie

SAMPLE NO.	ENTRY NO.	ENTRY	MILLING QUALITY SCORE		BAKING QUALITY SCORE		SOFT. EQUIV. SCORE			TEST WT. LB/BU		ADJ. YIELD %		SOFT. EQUIV. %		FLOUR PROT. %		LACTIC ACID SRC		SUCROSE SRC %
*	STD =	Ernie	54.63	D	75.83	B	75.71	B		56.23		66.68		54.76		8.82		85.87		86.41
910510	30	VA06W-575	64.8	C	70.3	B	80.5	A		59.5		68.7		56.4		9.32		92.6		88.9
910511	31	VA06W-587	64.8	C	78.4	B	84.9	A		60.2		68.7		58.0		8.58		94.4		88.0
910512	32	VA07W-568	65.3	C	71.4	B	83.2	A		60.4		68.8		57.4		8.27		88.6		91.3
910513	33	VA07W-607	66.4	C	73.4	B	84.4	A		59.8		69.0		57.8		9.02		98.9		89.2
910514	34	VA05W-640	61.7	C	58.4	D	80.2	A		59.6		68.1		56.3		9.53		118.2		93.5
910515	35	LA01141D-98-6-2	69.2	C	64.7	C	87.3	A			Q	69.6		58.8		9.54		95.6		92.5
910516	36	LA03187C-2	56.9	D	51.7	D	90.4	A		57.1		67.1		59.9		9.20		113.1		99.5
910517	37	LA01164D-43-7-B	42.9	E	35.4	F	48.8	E		58.4		64.3	Q	45.3	Q	10.89	Q	92.5		92.9
910518	38	ARGE97-1048-6	73.3	B	59.3	D	78.1	B		60.1		70.4		55.6		10.03	*	85.3		91.6
910519	39	GA 991209-6E33	77.0	B	68.3	C	78.9	B		60.6		71.1		55.9		8.76		84.7		90.5
910520	40	GA 031454-DH38-7	65.7	C	60.3	C	70.2	B		59.6		68.9		52.8		10.01	*	90.3		89.2
910521	41	GA 031454-DH38-8 (11	61.8	C	53.2	D	68.0	C		59.3		68.1		52.1		10.54	*	90.5		90.6
910522	42	GA 991109-1-G1	63.9	C	66.0	C	76.7	B		58.7		68.5		55.1		8.13		100.7		92.3
910523	43	GA 991109-1-G2	62.1	C	59.5	D	77.3	B		58.3		68.2		55.3		8.45		104.5		94.6
910524	44	ARS03-5358	67.7	C	56.6	D	95.4	A			Q	69.3		61.6		10.82	Q	120.3		95.3
910525	45	ARS03-3806	62.9	C	25.1	F	39.4	F			Q	68.3		42.1	Q	10.41	*	93.7		96.0
910526	46	ARS03-4736	69.5	C	15.2	F	33.5	F		60.4		69.7		40.0	Q	10.39	*	114.7		98.8
910527	47	ARS04-1249	74.8	B	20.3	F	40.7	E			Q	70.7		42.5	Q	10.86	Q	107.5		97.4
910528	48	ARS05-0443	54.9	D	7.5	F	108.2	A			Q	66.7		66.1		9.57		125.3		122.1
910529	49	ARS05-0242	82.7	A	23.1	F	36.3	F			Q	72.3		41.0	Q	10.30	*	96.7		96.3
910530	50	ARS05-1044	72.1	B	21.5	F	33.9	F		58.6		70.2		40.1	Q	10.06	*	107.5		96.9
910531	51	ARS05-1234	74.5	B	19.5	F	48.6	E		59.4		70.6		45.3	Q	11.00	Q	117.5		99.4
910532	52	NC05-23015	70.4	B	63.4	C	79.0	B		59.7		69.8		55.9		9.56		102.5		91.0
910533	53	NC05-20671	63.1	C	67.1	C	87.1	A			Q	68.4		58.7		9.41		91.4		91.7
910534	54	NC05-21937	77.2	B	53.0	D	26.9	F		57.3		71.2		37.7	Q	9.95	*	75.7		81.9
910535	55	NC06-20288	89.2	A	79.4	B	95.2	A		59.3		73.6		61.6		9.92	*	94.4		87.4
910536	56	NC07-23170	73.6	B	58.9	D	71.8	B		60.0		70.5		53.4		10.30	*	93.2		89.6
910537	57	NC07-22927	67.4	C	71.7	B	79.2	B		58.3		69.2		56.0		9.81	*	91.6		87.0
		average	66.19		60.14		78.25			59.09		68.99		55.64		9.46		96.85		92.42

EARLY GENERATION SCREENING EVALUATION
FOR SOFT WHEAT MILLING AND BAKING QUALITY
2009 CROP

Carl Griffey - Virginia Tech
Warsaw, VA
2009 SUFHB Scab nursery

GRAIN CONDITION SCALE

FHB, SPROUTING and BLACK POINT		SHRIVELING	
0	None	0	None
1	up to 10%	1	Some
2	10% to 40%	2	Moderate
3	above 40%	3	Heavy

SAMPLE NO.	ENTRY NO.	ENTRY	SHRIVELING AFTER CLEANING (0-3)	COLOR	COMMENTS
910481	1	ERNIE	1		
910482	2	COKER 9835	2		
910483	3	BESS	0		
910484	4	JAMESTOWN	0		
910485	5	AR 97002-2-1	0		
910486	6	AR99039-5-2	1		
910487	7	AR 99263-7-1	2		
910488	8	VA05W-510	1		
910489	9	B030543	0		
910490	10	LA01164D-94-2	1		
910491	11	LA01162D-131-8	0		
910492	12	LA01162D-136-8	1		
910493	13	GA 031454-DH7	2		
910494	14	GA 031307-DH14	1		
910495	15	NC05-21090	1		
910496	16	AR 99254-7-1	1		
910497	17	AR 99054-4-1	1		
910498	18	AR 99071-7-2	1-2		
910499	19	MD02W81-08-6	1		
910500	20	MD01W255-08-1	1		
910501	21	M05-1531	1		
910502	22	B0390207	1		
910503	23	03M1539#031	0		
910504	24	03M1599#0007	1		
910505	25	MH06-2370	1		
910506	26	ML07*7571	1		
910507	27	ML07-7758	1		
910508	28	VA04W-90	1		
910509	29	VA05W-534	1		
910510	30	VA06W-575	1		
910511	31	VA06W-587	1		

2009M06 Griffey SUFHB

Scab	Weathering	Sprouting
Yes	Yes	Yes
90%	50%	910484
moderate	slight	910500
		910510
		910517*
		910522*
		910523
		910530

* moderate to heavy

Moisture	Comments
13.69%	Few in pretty good shape, most slight weathering with little scab, few wo

EARLY GENERATION SCREENING EVALUATION
FOR SOFT WHEAT MILLING AND BAKING QUALITY
2009 CROP

Carl Griffey - Virginia Tech
Warsaw, VA
2009 SUFHB Scab nursery

GRAIN CONDITION SCALE

FHB, SPROUTING and BLACK POINT		SHRIVELING	
0	None	0	None
1	up to 10%	1	Some
2	10% to 40%	2	Moderate
3	above 40%	3	Heavy

			SHRIVELING			**2009M06 Griffey SUFHB**		
SAMPLE	ENTRY	ENTRY	AFTER	COLOR	COMMENTS	Scab	Weathering	Sprouting
NO.	NO.		CLEANING			Yes	Yes	Yes
			(0-3)			90%	50%	910484
						moderate	slight	910500
910512	32	VA07W-568	0					
910513	33	VA07W-607	1					
910514	34	VA05W-640	1					
910515	35	LA01141D-98-6-2	1					
910516	36	LA03187C-2	1					
910517	37	LA01164D-43-7-B	1					
910518	38	ARGE97-1048-6	1					
910519	39	GA 991209-6E33	1					
910520	40	GA 031454-DH38-7	1					
910521	41	GA 031454-DH38-8 (11	1					
910522	42	GA 991109-1-G1	0					
910523	43	GA 991109-1-G2	1					
910524	44	ARS03-5358	0					
910525	45	ARS03-3806	0					
910526	46	ARS03-4736	1					
910527	47	ARS04-1249	0					
910528	48	ARS05-0443	1					
910529	49	ARS05-0242	1					
910530	50	ARS05-1044	1					
910531	51	ARS05-1234	0					
910532	52	NC05-23015	1					
910533	53	NC05-20671	1					
910534	54	NC05-21937	1					
910535	55	NC06-20288	1					
910536	56	NC07-23170	1-2					
910537	57	NC07-22927	0					

EARLY GENERATION SCREENING
EVALUATION SUMMARY
2009 CROP

Carl Griffey - Virginia Tech
Warsaw, VA
2009 SUFHB Scab nursery

		STD.		AVG.	
		DATA		DATA	
MILLING QUALITY SCORE		54.63	D	66.19	
BAKING QUALITY SCORE		75.83	B	60.14	
SE SCORE		75.71	B	78.25	

		STD.		AVG.		ADJ.		NOTATION		
		DATA		DATA		L.S.D.		BEGINS		
								*		Q
TEST WEIGHT		56.23		59.09		1.09		55.14		54.05
FLOUR YIELD		66.68		68.99		0.72		65.96		65.25
SOFTNESS EQUIV.		54.76		55.64		2.94		51.81		48.87
FLOUR PROTEIN		8.82		9.46		0.87		9.69		10.55
SUCROSE SRC		86.41		92.42		3.80				
LACTIC ACID SRC		85.87		96.85		3.78				

		A		B		C		D		E		F	TOTAL
MILLING SCORE		4		14		27		11		1		0	
BAKING SCORE		6		12		17		12		1		9	57
SOFTNESS EQUIV. SCORE		31		15		3		0		3		5	

EARLY GENERATION SCREENING EVALUATION
FOR SOFT WHEAT MILLING AND BAKING QUALITY
2009 Crop

Carl Griffey - Virginia Tech
Warsaw, VA
2009 SUFHB Scab nursery

ENTRY	MILLING QUALITY SCORE	BAKING QUALITY SCORE	SOFT. EQUIV. SCORE	TEST WT. LB/BU	ADJ. YIELD %	SOFT. EQUIV. %	FLOUR PROT. %	LACTIC ACID SRC	SUCROSE SRC %
Nursery Average	66.19	60.14	78.25	59.09	68.99	55.64	9.46	96.85	92.42
Allis Database - Ernie	54.63	75.83	75.71	60.10	75.87		8.89	99.00	
Ernie	54.63	75.83	75.71	56.23	66.68	54.76	8.82	85.87	86.41
Ernie - Average	55.77	65.16	68.14	60.25	68.25	54.86	8.86	88.34	84.74
Ernie - Standard Deviation	4.10	14.44	10.27	1.65	0.83	2.48	0.71	11.27	3.86
Bess	58.77	66.02	88.82		67.51	59.34	9.09	88.02	93.26
Bess - Average	62.37	58.45	65.19	61.93	69.08	55.01	9.08	84.97	88.67
Bess - Standard Deviation	5.75	9.96	8.31	0.77	1.41	1.98	1.19	4.13	5.87
Coker 9835	60.87	69.66	104.27		67.93	64.75	8.69	99.19	96.33
Coker 9835 - Average	61.18	82.13	96.48	61.31	69.33	61.52	8.85	88.85	89.89
Coker 9835 - Standard Deviation	7.65	11.37	7.51	0.82	1.00	2.89	1.46	9.04	4.51

Conditional formatting set:

Blue = values less than two standard deviations from the mean of the database average

Black = values greater than two standard deviations from the mean of the database average

ADVANCED NURSERY EVALUATION

FOR SOFT WHEAT MILLING AND BAKING QUALITY

2009 CROP

Jerry Johnson - University of Georgia

Athens, GA

GAWN - Gulf Atlantic Wheat Nursery

STD = USG 3555

LAB NO.	ENTRY NO.	ENTRY	MILLING QUALITY SCORE		BAKING QUALITY SCORE		SOFT. EQUIV. SCORE			MICRO T.W. LB/BU		FLOUR YIELD %		SOFT. EQUIV. %		FLOUR PROT. %		LACTIC ACID SRC		SUCROSE SRC %		COOKIE DIAM. CM.		TOP GR.
****	STD=	USG 3555	57.59	D	34.00	F	59.43	D		57.81		68.09		59.60		9.57		129.02		108.57		17.42		4.00
920961	1	AR01008-12-2-C	80.8	A	75.0	B	68.6	C		60.9		72.7		62.8		9.51		114.8		96.3		18.65		2
920962	2	LA01005D-2-2-C	70.6	B	70.6	B	62.3	C		58.7		70.7		60.6		9.19		136.3		101.0		18.52		3
920963	3	LA01110C-J10	66.2	C	68.7	C	59.4	D		59.9		69.8		59.6		9.50		141.8		99.1		18.46		5
920964	4	LA01110D-100-6-4	62.5	C	61.3	C	56.8	D		60.0		69.1		58.7		9.40		127.5		102.8		18.24		4
920965	5	LA01110D-181-6-B	60.7	C	79.6	B	67.5	C		58.4		68.7		62.4		8.75		121.0		96.2		18.79		3
920966	6	LA01110D-208-5-C	63.7	C	91.5	A	67.4	C		58.7		69.3		62.4		8.64		123.5		95.4		19.14		4
920967	7	AGS 2060 CK	69.4	C	76.6	B	51.4	D		61.9		70.4		56.8		9.33		131.0		97.8		18.70		5
920968	8	LA01110D-84-2-C	61.4	C	79.6	B	62.5	C		59.8		68.8		60.7		8.86		130.9		95.0		18.79		7
920969	9	LA01139D-86-6-2	71.0	B	86.4	A	61.8	C		60.6		70.8		60.4		9.40		118.8		98.9		18.99		3
920970	10	LA95135 CK	59.2	D	56.7	D	71.5	B		59.4		68.4		63.8		9.36		126.3		109.6		18.10		2
920971	11	LA01164D-43-7-B	49.0	E	32.5	F	27.3	F		60.3		66.4	Q	48.4	Q	10.84		117.3		103.9		17.37		3
920972	12	LA01172D-27-5-4	78.6	B	77.5	B	80.6	A		58.4		72.3		67.0		8.60		140.8		97.1		18.72		3
920973	13	GA00067-8E35	60.3	C	69.4	C	60.5	C		60.9		68.6		60.0		9.82		128.6		97.8		18.48		2
920974	14	GA001138-8E36	79.3	B	84.5	A	59.5	D		60.7		72.4		59.6		9.53		107.7		94.4		18.93		5
920975	15	GA011493-8E18	63.4	C	73.0	B	52.8	D		61.9		69.3		57.3		9.59		108.5		102.0		18.59		5
920976	16	GA02264-8LE17	74.3	B	81.9	A	72.9	B		61.0		71.4		64.3		8.75		137.9		98.2		18.86		2
920977	17	GA011027-8LE24	49.5	E	37.2	F	64.7	C		58.2		66.5	Q	61.5		8.64		140.5		107.8		17.51		4
920978	18	GA011174-8A9	73.0	B	81.0	A	77.5	B		58.6		71.2		65.9		8.53		115.1		95.2		18.83		3
920979	19	GA981394-8A37	63.7	C	65.6	C	61.8	C		60.2		69.3		60.4		8.67		126.6		97.9		18.37		5
920980	20	GA02328-8A21	66.1	C	40.6	E	52.0	D		61.9		69.8		57.0		10.23		104.1		101.6		17.62		6
920981	21	GA001138-8E37	74.7	B	91.2	A	58.9	D		60.2		71.5		59.4		9.62		111.3		93.6		19.14		3
920982	22	GA011124-8LE32	60.4	C	51.5	D	52.9	D		61.4		68.6		57.3		10.68		146.2		103.9		17.94		4
920983	23	GA011124-8LE28	61.2	C	49.1	E	52.8	D		61.6		68.8		57.3		10.80		145.0		100.6		17.87		3
920984	24	GA021282-8A2	66.4	C	99.3	A	69.1	C		61.2		69.8		63.0		9.57		122.8		96.3		19.38		6
920985	25	NC06-19556	48.6	E	68.5	C	51.6	D		59.9		66.3	Q	56.9		9.63		110.9		102.1		18.45		4
920986	26	NC05-19896	68.9	C	76.4	B	54.6	D		60.0		70.4		57.9		9.29		121.0		93.8		18.69		5
920987	27	NC05-23015	66.9	C	80.6	A	55.4	D		60.2		69.9		58.2		9.36		123.2		91.8		18.82		3

ADVANCED NURSERY EVALUATION

FOR SOFT WHEAT MILLING AND BAKING QUALITY

2009 CROP

Jerry Johnson - University of Georgia

Athens, GA

GAWN - Gulf Atlantic Wheat Nursery

STD = USG 3555

LAB NO.	ENTRY NO.	ENTRY	MILLING QUALITY SCORE		BAKING QUALITY SCORE		SOFT. EQUIV. SCORE			MICRO T.W. LB/BU		FLOUR YIELD %		SOFT. EQUIV. %		FLOUR PROT. %		LACTIC ACID SRC		SUCROSE SRC %		COOKIE DIAM. CM.		TOP GR.
****	STD=	USG 3555	57.59	D	34.00	F	59.43	D		57.81		68.09		59.60		9.57		129.02		108.57		17.42		4.00
920988	28	NC06-22379	60.9	C	56.0	D	55.8	D		60.5		68.8		58.3		10.06		127.2		95.9		18.08		4
920989	29	NC06-20244	57.0	D	69.0	C	55.5	D		60.8		68.0		58.2		10.37		132.6		101.9		18.47		4
920990	30	NC06-20288	58.9	D	85.2	A	52.6	D		59.7		68.3		57.2		10.01		114.4		92.7		18.95		5
920991	31	NC06-20401	51.3	D	31.8	F	41.2	E		60.7		66.8	*	53.2	*	10.48		129.9		107.4		17.35		1
920992	32	NC06-22003	51.1	D	26.2	F	40.3	E		61.0		66.8	*	52.9	Q	10.05		126.0		106.0		17.18	*	2
920993	33	NC06-21245	59.4	D	61.3	C	45.5	E		59.9		68.4		54.7	*	9.43		122.9		97.4		18.24		5
920994	34	NC05-20671	63.0	C	55.0	D	54.0	D		60.1		69.2		57.7		9.67		111.5		94.8		18.05		4
920995	35	NC05-23993	68.8	C	64.9	C	55.3	D		60.2		70.3		58.2		10.14		127.8		96.0		18.35		6
920996	36	NC05-22804	59.9	D	63.6	C	63.7	C		59.7		68.5		61.1		10.06		137.2		97.3		18.31		3
920997	37	USG3555	57.6	D	34.0	F	59.4	D		57.8		68.1		59.6		9.57		129.0		108.6		17.42		4
920998	38	SCAR99050B1	59.5	D	65.1	C	49.9	E		59.3		68.5		56.3	*	9.87		119.4		98.2		18.35		5
920999	39	SCAR99080E1	54.9	D	55.5	D	56.6	D		58.9		67.6		58.6		10.20		103.9		99.9		18.06		3
921000	40	SCAR99103N1	64.1	C	67.6	C	60.6	C		59.3		69.4		60.0		9.61		115.0		95.1		18.43		6
921001	41	SCAR99143A1	57.3	D	65.9	C	56.7	D		60.1		68.0		58.6		10.18		114.1		103.6		18.37		3
921002	42	SCAR99175B1	72.5	B	87.7	A	77.3	B		57.4		71.1		65.9		8.86		115.6		94.4		19.03		4
921003	43	SCAR99180A1	77.7	B	79.1	B	64.0	C		60.4		72.1		61.2		9.49		115.8		96.5		18.77		5
921004	44	SCTX98-17A1	54.6	D	66.3	C	63.5	C		60.0		67.5		61.0		9.61		142.5		103.5		18.39		3
921005	45	SCTX98-27A1	62.4	C	52.6	D	43.4	E		58.7		69.1		54.0	*	9.78		131.5		103.9		17.98		3
921006	46	SCTX98-27B1	61.9	C	88.8	A	47.1	E		59.6		68.9		55.3	*	9.88		119.0		96.6		19.06		5
921007	47	SCTX98-27C1	64.4	C	71.4	B	47.7	E		59.9		69.4		55.5	*	9.81		118.9		95.8		18.54		4
921008	48	SCTX98-56G1	65.4	C	75.6	B	53.7	D		59.3		69.6		57.6		8.97		115.5		98.3		18.66		6
921009	49	SCTX98-5B1	77.5	B	74.7	B	60.7	C		61.1		72.1		60.1		9.82		109.2		97.8		18.64		5
921010	50	AR99174-5-1	75.8	B	62.2	C	50.6	D		58.5		71.7		56.5		10.07		91.7		94.0		18.27		4
921011	51	AR990044-3-1	77.0	B	64.8	C	50.5	D		58.8		72.0		56.5		10.21		89.5		96.2		18.34		5
921012	52	AR99015-2-1	63.0	C	53.6	D	65.8	C		60.0		69.2		61.8		9.76		122.1		97.4		18.01		4
921013	53	AR99009-3-2	57.9	D	39.7	F	50.0	D		60.0		68.1		56.3	*	9.95		108.3		98.6		17.59		5
921014	54	AR99039-2-1	73.7	B	67.2	C	59.7	D		59.4		71.3		59.7		9.52		112.0		91.1		18.41		5

ADVANCED NURSERY EVALUATION

FOR SOFT WHEAT MILLING AND BAKING QUALITY

2009 CROP

Jerry Johnson - University of Georgia

Athens, GA

GAWN - Gulf Atlantic Wheat Nursery

STD = USG 3555

LAB NO.	ENTRY NO.	ENTRY	MILLING QUALITY SCORE		BAKING QUALITY SCORE		SOFT. EQUIV. SCORE			MICRO T.W. LB/BU		FLOUR YIELD %		SOFT. EQUIV. %		FLOUR PROT. %		LACTIC ACID SRC		SUCROSE SRC %		COOKIE DIAM. CM.		TOP GR.
****	STD=	USG 3555	57.59	D	34.00	F	59.43	D		57.81		68.09		59.60		9.57		129.02		108.57		17.42		4.00
921015	55	AR99238-4-1	62.6	C	42.7	E	62.7	C		60.1		69.1		60.7		9.70		139.8		103.1		17.68		3
921016	56	AR99138-7-1	65.3	C	59.4	D	63.6	C		61.2		69.6		61.1		9.68		148.6		99.2		18.18		2
921017	57	AR99015-3-3	65.5	C	31.2	F	66.8	C		60.0		69.7		62.2		9.67		130.7		108.3		17.33		2
921018	58	AR99110-11-4	89.5	A	-33.9	F	10.4	F		59.5		74.5		42.5	Q	11.08		97.2		105.0		15.38	Q	0
921019	59	AR98088-1-2	68.9	C	59.9	D	57.5	D		59.8		70.3		58.9		9.11		103.3		93.1		18.20		4
921020	60	AR98068-4-1	66.5	C	58.4	D	49.6	E		60.3		69.9		56.2	*	9.93		118.1		96.8		18.15		3
921021	61	AR00120-11-1	75.3	B	76.0	B	66.8	C		56.5	*	71.6		62.2		9.17		122.8		95.2		18.68		3
921022	62	VA04W-306	59.7	D	67.4	C	55.2	D		58.9		68.5		58.1		9.18		119.1		96.2		18.42		4
921023	63	VA06W-6	63.6	C	59.5	D	63.4	C		60.0		69.3		61.0		10.77		109.7		98.9		18.18		3
921024	64	VA06W-194	61.3	C	69.5	C	62.7	C		59.2		68.8		60.8		9.27		143.5		99.3		18.48		3
921025	65	VA06W-256	75.0	B	76.5	B	79.0	B		59.1		71.6		66.5		9.33		138.0		97.9		18.69		3
921026	66	VA06W-423	74.4	B	63.5	C	79.2	B		59.1		71.4		66.5		9.08		147.4		102.9		18.30		3
921027	67	VA06W-412	60.7	C	82.3	A	70.6	B		60.4		68.7		63.5		9.08		135.5		99.5		18.87		4
921028	68	VA07W-27	65.2	C	67.0	C	76.3	B		59.0		69.6		65.5		9.09		125.2		104.3		18.41		4
921029	69	VA07W-83	72.8	B	75.9	B	67.6	C		59.5		71.1		62.5		9.61		135.7		99.6		18.68		4
921030	70	VA07W-138	47.6	E	21.2	F	53.5	D		59.1		66.1	Q	57.5		10.14		151.7		116.1		17.04	*	3
921031	71	VA07W-214	54.8	D	62.9	C	59.8	D		60.2		67.5		59.7		9.33		149.3		110.3		18.29		3
921032	72	VA07W-347	65.9	C	67.2	C	71.6	B		59.4		69.7		63.9		8.93		142.9		103.9		18.41		4
921033	73	VA07W-415	73.1	B	76.3	B	63.6	C		59.1		71.2		61.1		9.04		128.2		103.2		18.69		4
921034	74	SS8641 CK	59.7	D	77.6	B	51.7	D		60.1		68.5		56.9		10.06		138.5		100.5		18.72		4
		average	64.93		64.20		58.74			59.81		69.55		59.36		9.60		124.42		99.49		18.32		3.78

ADVANCED EVALUATION

FOR SOFT WHEAT MILLING AND BAKING QUALITY

2009 CROP

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GRAIN CONDITION SCALE

FHB, SPROUTING and BLACK POIN

0	None
1	up to 10%
2	10% to 40%
3	above 40%

SHRIVELING

0	None
1	Some
2	Moderate
3	Heavy

LAB NO.	ENTRY NO.	ENTRY	FHB (0-3)	WEATHERING (Yes/No)	SPROUTING (0-3)	BLACK POINT (0-3)	SHRIVELING AFTER CLEANING (0-3)	COLOR	COMMENTS
920961	1	AR01008-12-2-C	1	y	0	0	1	red	
920962	2	LA01005D-2-2-C	0	y	0	0	1	red	black dots on some kernals. Fungus?
920963	3	LA01110C-J10	2	y	0	2	2	red	
920964	4	LA01110D-100-6-4	1	y	0	1	2	red	black dots on some kernals. Fungus?
920965	5	LA01110D-181-6-B	2	y	0	0	0	red	
920966	6	LA01110D-208-5-C	1	y	0	1	0	red	
920967	7	AGS 2060 CK	2	y	0	0	1	red	
920968	8	LA01110D-84-2-C	1	y	0	2	1	red	grayish end of some kernals. fungus?
920969	9	LA01139D-86-6-2	1	y	0	1	1	red	black dots on some kernals. Fungus?
920970	10	LA95135 CK	2	y	0	0	1	red	
920971	11	LA01164D-43-7-B	0	y	0	1	2	red	grayish end of some kernals. fungus?
920972	12	LA01172D-27-5-4	0	y	0	1	1	red	
920973	13	GA00067-8E35	1	y	0	1	2	red	
920974	14	GA001138-8E36	2	y	0	2	0	red	
920975	15	GA011493-8E18	2	y	0	1	1	red	
920976	16	GA02264-8LE17	2	y	0	1	0	red	
920977	17	GA011027-8LE24	1	y	0	1	0	red	black dots on some kernals. Fungus?
920978	18	GA011174-8A9	1	y	0	0	1	red	
920979	19	GA981394-8A37	0	y	0	0	0	red	
920980	20	GA02328-8A21	1	y	0	0	2	red	
920981	21	GA001138-8E37	2	y	0	2	2	red	
920982	22	GA011124-8LE32	1	y	0	0	1	red	black dots on some kernals. Fungus?
920983	23	GA011124-8LE28	2	y	0	0	1	red	
920984	24	GA021282-8A2	2	y	0	2	0	red	
920985	25	NC06-19556	2	y	0	0	1	red	
920986	26	NC05-19896	1	y	0	0	1	red	
920987	27	NC05-23015	1	y	0	0	2	red	
920988	28	NC06-22379	1	y	0	0	2	red	
920989	29	NC06-20244	1	y	0	1	2	red	grayish end of some kernals. fungus?
920990	30	NC06-20288	1	y	0	0	1	red	
920991	31	NC06-20401	0	y	0	0	1	red	

ADVANCED EVALUATION

FOR SOFT WHEAT MILLING AND BAKING QUALITY

2009 CROP

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LAB NO.	ENTRY NO.	ENTRY	FHB (0-3)	WEATHERING (Yes/No)	SPROUTING (0-3)	BLACK POINT (0-3)	SHRIVELING AFTER CLEANING (0-3)	COLOR	COMMENTS
920992	32	NC06-22003	1	y	0	0	2	red	
920993	33	NC06-21245	0	y	0	0	1	red	
920994	34	NC05-20671	1	y	0	0	1	red	
920995	35	NC05-23993	2	y	0	0	2	red	
920996	36	NC05-22804	2	y	0	1	2	red	
920997	37	USG3555	1	y	0	0	2	red	
920998	38	SCAR99050B1	2	y	0	0	2	red	black dots on some kernals. Fungus?
920999	39	SCAR99080E1	2	y	0	0	1	red	
921000	40	SCAR99103N1	1	y	0	1	1	red	black dots on some kernals. Fungus?
921001	41	SCAR99143A1	1	y	0	0	2	red	
921002	42	SCAR99175B1	2	y	0	0	1	red	
921003	43	SCAR99180A1	1	y	0	0	2	red	
921004	44	SCTX98-17A1	1	y	0	0	0	red	
921005	45	SCTX98-27A1	0	y	0	0	2	red	
921006	46	SCTX98-27B1	0	y	0	0	1	red	
921007	47	SCTX98-27C1	1	y	0	0	2	red	
921008	48	SCTX98-56G1	2	y	0	1	2	red	
921009	49	SCTX98-5B1	2	y	0	0	1	red	
921010	50	AR99174-5-1	2	y	0	0	1	red	
921011	51	AR990044-3-1	1	y	0	0	1	red	
921012	52	AR99015-2-1	0	y	0	1	1	red	
921013	53	AR99009-3-2	1	y	0	2	2	red	
921014	54	AR99039-2-1	2	y	0	0	2	red	
921015	55	AR99238-4-1	1	y	0	1	1	red	
921016	56	AR99138-7-1	1	y	0	1	1	red	
921017	57	AR99015-3-3	2	y	0	0	1	red	
921018	58	AR99110-11-4	2	y	0	0	2	red	
921019	59	AR98088-1-2	0	y	0	0	0	red	
921020	60	AR98068-4-1	2	y	0	0	1	red	
921021	61	AR00120-11-1	1	y	0	0	2	red	
921022	62	VA04W-306	1	y	0	0	1	red	

GRAIN CONDITION SCALE

FHB, SPROUTING and BLACK POIN

0	None
1	up to 10%
2	10% to 40%
3	above 40%

SHRIVELING

0	None
1	Some
2	Moderate
3	Heavy

ADVANCED EVALUATION

FOR SOFT WHEAT MILLING AND BAKING QUALITY

2009 CROP

Jerry Johnson - University of Georgia

Athens, GA

GAWN - Gulf Atlantic Wheat Nursery

LAB NO.	ENTRY NO.	ENTRY	FHB (0-3)	WEATHERING (Yes/No)	SPROUTING (0-3)	BLACK POINT (0-3)	SHRIVELING AFTER CLEANING (0-3)	COLOR	COMMENTS
921023	63	VA06W-6	0	y	0	0	2	red	
921024	64	VA06W-194	2	y	0	0	1	red	black dots on some kernals. Fungus?
921025	65	VA06W-256	2	y	0	0	1	red	
921026	66	VA06W-423	2	y	0	1	0	red	
921027	67	VA06W-412	1	y	1	1	1	red	
921028	68	VA07W-27	1	y	0	1	1	red	black dots on some kernals. Fungus?
921029	69	VA07W-83	1	y	0	0	0	red	
921030	70	VA07W-138	1	y	0	0	1	red	
921031	71	VA07W-214	0	y	0	0	0	red	
921032	72	VA07W-347	2	y	0	1	1	red	
921033	73	VA07W-415	1	y	0	0	1	red	
921034	74	SS8641 CK	1	y	0	2	1	red	

GRAIN CONDITION SCALE

FHB, SPROUTING and BLACK POIN

0	None
1	up to 10%
2	10% to 40%
3	above 40%

SHRIVELING

0	None
1	Some
2	Moderate
3	Heavy

ADVANCED NURSERY
EVALUATION SUMMARY
2009 CROP

Jerry Johnson - University of Georgia
Athens, GA
GAWN - Gulf Atlantic Wheat Nursery

		STD.		AVG.	
		DATA		DATA	
MILLING QUALITY SCORE		57.59	D	64.93	
BAKING QUALITY SCORE		34.00	F	64.20	
SE SCORE		59.43	D	58.74	

		STD.		AVG.	ADJ.	NOTATION	
		DATA		DATA	L.S.D.	BEGINS	
						*	Q
TEST WEIGHT		57.81		59.81	1.12	56.69	55.57
FLOUR YIELD		68.09		69.55	0.73	67.35	66.62
SOFTNESS EQUIV.		59.60		59.36	3.21	56.40	53.19
FLOUR PROTEIN		9.57		9.60	0.77	10.34	11.12
SUCROSE SRC		108.57		99.49			
LACTIC ACID RETENTION		129.02		124.42			
COOKIE DIAMETER		17.42		18.32	0.23	17.19	16.95

		A	B	C	D	E	F	TOTAL
MILLING SCORE		1	7	19	10	3	0	
BAKING SCORE		9	8	11	5	2	5	40
SOFTNESS EQUIV. SCORE		1	3	12	19	4	1	

ADVANCED NURSERY EVALUATION
FOR SOFT WHEAT MILLING AND BAKING QUALITY
2009 Crop

Jerry Johnson - University of Georgia

Athens, GA

GAWN - Gulf Atlantic Wheat Nursery

ENTRY	MILLING QUALITY SCORE	BAKING QUALITY SCORE	SOFT. EQUIV. SCORE	TEST WT. LB/BU	ADJ. YIELD %	SOFT. EQUIV. %	FLOUR PROT. %	LACTIC ACID SRC	SUCROSE SRC %	COOKIE DIAM. CM.	TOP GR.
Nursery Average	64.93	64.20	58.74	59.81	69.55	59.36	9.60	124.42	99.49	18.32	3.78
Allis Database - USG 3555	57.59	34.00	59.43	63.64	76.10		8.89	103.10		16.82	
USG 3555	57.59	34.00	59.43	57.81	68.09	59.60	9.57	129.02	108.57	17.42	4.00
USG 3555 - Average	62.74	40.33	55.58	61.60	70.14	54.21	8.87	110.99	103.99	18.08	4.43
USG 3555 - Standard Deviation	1.83	8.81	7.24	1.26	0.81	1.50	0.74	3.88	7.33	0.37	0.98
SS 8641	59.73	77.56	51.74	60.05	68.51	56.92	10.06	138.52	100.48	18.72	4.00
SS 8641 - Average	66.08	45.59	51.01	62.44	69.36	53.89	9.26	123.35	101.89	18.33	5.00
SS 8641 - Standard Deviation	8.13	28.71	3.49	0.85	0.90	0.26	0.05	2.45	2.23	0.08	0.00

Conditional formatting set:

Blue = values less than two standard deviations from the mean of the database average

Black = values greater than two standard deviations from the mean of the database average

ADVANCED NURSERY EVALUATION

FOR SOFT WHEAT MILLING AND BAKING QUALITY

2009 CROP

Stephen Harrison - LSU

Blacksburg, VA - Plains, GA - Greenville, MS - Winnsboro, LA

2009 Uniform Southern Regional Soft Red Winter Wheat Nursery - Coastal

STD = AGS 2000

LAB NO.	ENTRY NO.	ENTRY	MILLING QUALITY SCORE		BAKING QUALITY SCORE		SOFT. EQUIV. SCORE			MICRO T.W. LB/BU		FLOUR YIELD %		SOFT. EQUIV. %		FLOUR PROT. %		LACTIC ACID SRC		SUCROSE SRC %		COOKIE DIAM. CM.		TOP GR.
****	STD=	AGS 2000	85.91	A	69.87	C	62.91	C		59.77		71.17		63.19		9.35		120.47		98.87		18.89		3.00
920921	1	AGS 2000	85.9	A	69.9	C	62.9	C		59.8		71.2		63.2		9.35		120.5		98.9		18.89		3
920922	2	Pioneer Brand 26R61	75.4	B	44.7	E	58.4	D		59.3		69.1	Q	61.6		9.66		126.0		104.6		18.13	Q	3
920923	3	Coker 9553	72.8	B	53.2	D	64.1	C		59.9		68.5	Q	63.6		9.26		123.8		100.0		18.39	*	3
920924	4	USG 3555	76.4	B	43.3	E	57.0	D		57.9	*	69.3	Q	61.1		9.10		124.0		102.3		18.09	Q	3
920925	5	MO011126	88.2	A	74.9	B	57.4	D		57.9	*	71.6		61.3		9.16		121.5		94.0		19.04		7
920926	6	NC04-20814	71.5	B	33.6	F	56.8	D		57.9	*	68.3	Q	61.1		8.92		136.1		100.7		17.80	Q	3
920927	7	LA01140D-70	88.1	A	77.5	B	61.3	C		58.0	*	71.6		62.6		9.23		129.9		92.1		19.12		3
920928	8	TN802	75.3	B	52.9	D	62.2	C		58.0	*	69.1	Q	62.9		8.37		128.5		104.6		18.38	Q	4
920929	9	TN501	71.2	B	26.3	F	40.8	E		58.0	*	68.2	Q	55.5	Q	9.95		98.1		105.0		17.58	Q	2
920930	10	W990002K1	81.7	A	48.2	E	58.4	D		58.0	*	70.3	*	61.6		9.43		122.0		103.3		18.24	Q	3
920931	11	W980031K1	73.6	B	54.6	D	54.1	D		58.0	*	68.7	Q	60.1		9.54		124.5		97.9		18.43	*	3
920932	12	W980031L1	70.5	B	33.3	F	63.1	C		58.0	*	68.1	Q	63.3		9.10		141.3		109.8		17.79	Q	3
920933	13	GA031238-DH7-7E34	88.1	A	45.9	E	44.8	E		58.0	*	71.6		56.9	*	9.00		134.3		95.8		18.17	Q	3
920934	14	GA001170-7E26	76.4	B	50.9	D	49.0	E		58.0	*	69.3	Q	58.3	*	8.93		128.8		106.4		18.32	Q	1
920935	15	GA001169-7E15	80.2	A	44.3	E	54.3	D		58.0	*	70.0	*	60.2		8.64		132.2		105.0		18.12	Q	3
920936	16	GA001492-7E9	91.3	A	58.2	D	61.7	C		58.0	*	72.2		62.8		9.05		128.0		91.6		18.54	*	3
920937	17	MD01W233-07-1	69.0	C	55.9	D	51.3	D		58.0	*	67.8	Q	59.1	*	9.86		116.2		100.6		18.47	*	4
920938	18	MD00W53-07-1	64.9	C	40.9	E	37.1	F		58.0	*	67.0	Q	54.2	Q	9.54		109.4		103.0		18.02	Q	7
920939	19	G89270	80.8	A	79.5	B	72.6	B		58.0	*	70.1	*	66.6		8.79		105.1		89.1		19.18		4
920940	20	G89283	74.9	B	74.6	B	66.2	C		58.1	*	69.0	Q	64.3		8.69		141.9		101.3		19.03		4
920941	21	G89267	72.6	B	55.0	D	57.9	D		58.1	*	68.5	Q	61.4		8.74		119.3		97.5		18.44	*	5
920942	22	B040798	81.4	A	74.3	B	59.1	D		58.1	*	70.3	*	61.8		9.13		116.2		93.0		19.02		3
920943	23	D05-6189	73.2	B	76.3	B	63.9	C		58.1	*	68.6	Q	63.5		8.91		108.0		94.0		19.08		5
920944	24	D05*6441	79.8	B	77.2	B	58.9	D		58.1	*	69.9	*	61.8		9.21		132.6		98.6		19.11		2
920945	25	FL01029-K1	78.2	B	41.0	E	68.2	C		58.1	*	69.6	Q	65.1		8.80		123.8		105.6		18.02	Q	4
920946	26	Z03-0496	65.9	C	38.4	F	48.5	E		58.1	*	67.2	Q	58.1	*	8.81		119.4		104.2		17.95	Q	2
920947	27	ARS03-5358	82.7	A	73.8	B	57.5	D		58.1	*	70.5		61.3		9.58		139.4		96.3		19.01		4

ADVANCED NURSERY EVALUATION

FOR SOFT WHEAT MILLING AND BAKING QUALITY

2009 CROP

Stephen Harrison - LSU

Blacksburg, VA - Plains, GA - Greenville, MS - Winnsboro, LA

2009 Uniform Southern Regional Soft Red Winter Wheat Nursery - Coastal

STD = AGS 2000

LAB NO.	ENTRY NO.	ENTRY	MILLING QUALITY SCORE		BAKING QUALITY SCORE		SOFT. EQUIV. SCORE			MICRO T.W. LB/BU		FLOUR YIELD %		SOFT. EQUIV. %		FLOUR PROT. %		LACTIC ACID SRC		SUCROSE SRC %		COOKIE DIAM. CM.		TOP GR.
****	STD=	AGS 2000	85.91	A	69.87	C	62.91	C		59.77		71.17		63.19		9.35		120.47		98.87		18.89		3.00
920948	28	ARS05-0443	62.7	C	42.6	E	60.4	C		58.1	*	66.5	Q	62.3		9.29		138.4		110.1		18.07	Q	3
920949	29	VA04W-90	74.9	B	53.3	D	67.5	C		58.1	*	69.0	Q	64.8		8.55		129.7		102.6		18.39	*	3
920950	30	VA05W-139	64.5	C	33.3	F	44.5	E		58.1	*	66.9	Q	56.7	*	9.00		149.3		106.4		17.79	Q	1
920951	31	VA06W-392	74.1	B	77.8	B	54.6	D		58.1	*	68.8	Q	60.3		9.12		109.9		93.0		19.13		6
920952	32	VA05W-251	73.2	B	68.4	C	41.2	E		58.1	*	68.6	Q	55.6	Q	8.44		103.8		98.4		18.85		7
920953	33	LA01034D-235-1	78.8	B	81.3	A	49.3	E		58.1	*	69.7	*	58.4	*	8.70		118.2		92.2		19.23		3
920954	34	LA01029D-139-3	77.4	B	38.9	F	65.2	C		58.2	*	69.5	Q	64.0		8.98		125.7		105.5		17.96	Q	1
920955	35	LA01139D-56-1	89.9	A	86.9	A	53.0	D		58.2	*	72.0		59.7	*	9.09		126.3		89.7		19.40		4
920956	36	AR96052-4-3	66.9	C	62.3	C	57.2	D		58.2	*	67.4	Q	61.2		9.18		136.6		98.0		18.66		2
920957	37	AR98088-1-1	75.8	B	83.2	A	59.7	D		58.2	*	69.1	Q	62.1		8.55		105.8		95.2		19.29		7
920958	38	NC05-21090	72.1	B	51.7	D	62.4	C		58.2	*	68.4	Q	63.0		8.71		128.7		98.8		18.34	Q	3
920959	39	NC05-20276	63.9	C	51.0	D	54.1	D		58.2	*	66.8	Q	60.1		10.44	*	124.8		103.0		18.32	Q	2
920960	40	NC05-19684	77.3	B	70.4	B	63.9	C		58.2	*	69.5	Q	63.5		9.26		130.4		104.1		18.91		3
		average	76.03		57.49		57.02			58.18		69.20		61.12		9.10		124.46		99.80		18.52		3.48

ADVANCED EVALUATION

FOR SOFT WHEAT MILLING AND BAKING QUALITY

2009 CROP

Stephen Harrison - LSU

Blacksburg, VA - Plains, GA - Greenville, MS - Winnsboro, LA

2009 Uniform Southern Regional Soft Red Winter Wheat Nursery - Coastal

GRAIN CONDITION SCALE

FHB, SPROUTING and BLACK POINT

0	None
1	up to 10%
2	10% to 40%
3	above 40%

SHRIVELING

0	None
1	Some
2	Moderate
3	Heavy

LAB NO.	ENTRY NO.	ENTRY	FHB (0-3)	WEATHERING (Yes/No)	SPROUTING (0-3)	BLACK POINT (0-3)	SHRIVELING AFTER CLEANING (0-3)	COLOR	COMMENTS
920921	1	AGS 2000	1	?	1		1		
920922	2	Pioneer Brand 26R61	1	?	1-2		1		
920923	3	Coker 9553	1	n	1	1	1		
920924	4	USG 3555	1	y	1-2		1-2		
920925	5	MO011126	1	n	1		1		
920926	6	NC04-20814	1	y	1		1		
920927	7	LA01140D-70	1	y	1	1	1		
920928	8	TN802	1	y	1-2		2		
920929	9	TN501	1	y	1		1		
920930	10	W990002K1	1	y	1		1		
920931	11	W980031K1	1	y	1-2	1	2		
920932	12	W980031L1	1	y	1	1	1-2		
920933	13	GA031238-DH7-7E34	1	y	1	0	1		
920934	14	GA001170-7E26	1	?	2	0	1		
920935	15	GA001169-7E15	1	?	1-2	1	0		
920936	16	GA001492-7E9	1	?	1-2	0	1		
920937	17	MD01W233-07-1	1	y	2	1	1		
920938	18	MD00W53-07-1	1	y	2	?	1		
920939	19	G89270	1	?	1	0	0		
920940	20	G89283	0	n	0	0	1		
920941	21	G89267	1	y	1	1	0		
920942	22	B040798	1	y	1	0	0		
920943	23	D05-6189	1	y	1	1	1		
920944	24	D05*6441	1	y	1	0	1		
920945	25	FL01029-K1	1	?	1	0	1		
920946	26	Z03-0496	1	y	1	0	1		
920947	27	ARS03-5358	1	?	1	0	1		
920948	28	ARS05-0443	2	y	1	0	1		
920949	29	VA04W-90	1	n	1	0	0		
920950	30	VA05W-139	1	y	1	0	1		
920951	31	VA06W-392	1	?	1	0	1		

ADVANCED EVALUATION

FOR SOFT WHEAT MILLING AND BAKING QUALITY

2009 CROP

Stephen Harrison - LSU

Blacksburg, VA - Plains, GA - Greenville, MS - Winnsboro, LA

2009 Uniform Southern Regional Soft Red Winter Wheat Nursery - Coastal

LAB NO.	ENTRY NO.	ENTRY	FHB (0-3)	WEATHERING (Yes/No)	SPROUTING (0-3)	BLACK POINT (0-3)	SHRIVELING AFTER CLEANING (0-3)	COLOR	COMMENTS
920952	32	VA05W-251	1	y	1	0	1		
920953	33	LA01034D-235-1	1	y	1	1	1		
920954	34	LA01029D-139-3	1	?	1	0	1		
920955	35	LA01139D-56-1	1	?	1	0	1		
920956	36	AR96052-4-3	1	y	1	0	1		
920957	37	AR98088-1-1	1	?	1	0	1		
920958	38	NC05-21090	1	?	1	0	0		
920959	39	NC05-20276	1	n	1	0	1		
920960	40	NC05-19684	1	?	1	0	1		

GRAIN CONDITION SCALE

FHB, SPROUTING and BLACK POINT

0	None
1	up to 10%
2	10% to 40%
3	above 40%

SHRIVELING

0	None
1	Some
2	Moderate
3	Heavy

ADVANCED NURSERY
EVALUATION SUMMARY
2009 CROP

Stephen Harrison - LSU
Blacksburg, VA - Plains, GA - Greenville, MS - Winnsboro, LA
2009 Uniform Southern Regional Soft Red Winter Wheat Nursery - Coastal

		STD.		AVG.	
		DATA		DATA	
MILLING QUALITY SCORE		85.91	A	76.03	
BAKING QUALITY SCORE		69.87	C	57.49	
SE SCORE		62.91	C	57.02	

		STD.		AVG.	ADJ.	NOTATION	
		DATA		DATA	L.S.D.	BEGINS	
						*	Q
TEST WEIGHT		59.77		58.18	1.16	58.61	57.46
FLOUR YIELD		71.17		69.20	0.76	70.40	69.64
SOFTNESS EQUIV.		63.19		61.12	3.40	59.79	56.39
FLOUR PROTEIN		9.35		9.10	0.76	10.11	10.86
SUCROSE SRC		98.87		99.80			
LACTIC ACID RETENTION		120.47		124.46			
COOKIE DIAMETER		18.89		18.52	0.25	18.64	18.39

		A	B	C	D	E	F	TOTAL
MILLING SCORE		11	22	7	0	0	0	
BAKING SCORE		3	10	3	10	8	6	40
SOFTNESS EQUIV. SCORE		0	1	14	17	7	1	

ADVANCED NURSERY EVALUATION
FOR SOFT WHEAT MILLING AND BAKING QUALITY
2009 Crop

Stephen Harrison - LSU

Blacksburg, VA - Plains, GA - Greenville, MS - Winnsboro, LA

2009 Uniform Southern Regional Soft Red Winter Wheat Nursery - Coastal

ENTRY	MILLING QUALITY SCORE	BAKING QUALITY SCORE	SOFT. EQUIV. SCORE	TEST WT. LB/BU	ADJ. YIELD %	SOFT. EQUIV. %	FLOUR PROT. %	LACTIC ACID SRC	SUCROSE SRC %	COOKIE DIAM. CM.	TOP GR.
Nursery Average	76.03	57.49	57.02	58.18	69.20	61.12	9.10	124.46	99.80	18.52	3.48
Allis Database - AGS 2000	85.91	69.87	62.91	62.40	78.96		9.10	90.00		17.90	
AGS 2000	85.91	69.87	62.91	59.77	71.17	63.19	9.35	120.47	98.87	18.89	3.00
AGS 2000 - Average	79.25	54.34	69.13	62.81	72.14	57.59	8.86	103.34	92.31	17.87	3.82
AGS 2000 - Standard Deviation	7.09	13.41	10.25	2.55	1.05	3.41	0.63	6.81	2.64	0.44	1.24
Pioneer 26R61	75.42	44.69	58.37	59.30	69.07	61.60	9.66	125.98	104.60	18.13	3.00
Pioneer 26R61 - Average	68.35	43.99	62.56	62.50	69.58	55.19	9.26	109.68	92.79	17.49	3.33
Pioneer 26R61 - Standard Deviation	7.32	11.01	10.66	2.59	1.30	3.47	0.54	6.47	3.93	0.37	1.32
Coker 9553	72.76	53.17	64.08	59.89	68.54	63.60	9.26	123.76	99.99	18.39	3.00
Coker 9553 - Average	54.88	44.78	69.03	62.85	68.99	58.13	9.15	115.25	102.77	17.89	4.25
Coker 9553 - Standard Deviation	8.34	8.47	4.47	1.25	0.76	1.44	0.42	6.73	5.80	0.55	2.63

Conditional formatting set:

Blue = values less than two standard deviations from the mean of the database average

Black = values greater than two standard deviations from the mean of the database average

ADVANCED NURSERY EVALUATION

FOR SOFT WHEAT MILLING AND BAKING QUALITY

2009 CROP

Stephen Harrison - LSU

Warsaw, VA - Battle Ground, IN - Belle Mina, AL

2009 Uniform Southern Regional Soft Red Winter Wheat Nursery - Interior

STD = AGS 2000

LAB NO.	ENTRY NO.	ENTRY	MILLING QUALITY SCORE		BAKING QUALITY SCORE		SOFT. EQUIV. SCORE			MICRO T.W. LB/BU		FLOUR YIELD %		SOFT. EQUIV. %		FLOUR PROT. %		LACTIC ACID SRC		SUCROSE SRC %		COOKIE DIAM. CM.		TOP GR.
****	STD=	AGS 2000	85.91	A	69.87	C	62.91	C		60.95		72.43		59.43		9.11		104.53		92.71		19.13		3
920881	1	AGS 2000	85.9	A	69.9	C	62.9	C		61.0		72.4		59.4		9.11		104.5		92.7		19.13		3
920882	2	Pioneer Brand 26R61	69.9	C	36.2	F	48.7	E		62.3		69.2	Q	54.5	*	9.65		113.5		97.5		18.12	Q	3
920883	3	Coker 9553	63.4	C	52.0	D	64.8	C		61.0		67.9	Q	60.1		9.42		127.6		95.9		18.59	Q	4
920884	4	USG 3555	67.7	C	39.3	F	58.6	D		59.8		68.8	Q	57.9		8.88		118.9		102.6		18.21	Q	4
920885	5	MO011126	90.4	A	82.6	A	65.7	C		61.0		73.3		60.4		9.01		122.8		102.2		19.51		8
920886	6	NC04-20814	69.9	C	62.6	C	60.9	C		60.1		69.2	Q	58.7		8.66		125.7		98.2		18.91		7
920887	7	LA01140D-70	83.2	A	76.9	B	66.5	C		60.5		71.9		60.7		9.11		124.3		96.8		19.34		6
920888	8	TN802	68.7	C	43.5	E	66.8	C		59.4	*	69.0	Q	60.8		8.52		127.0		98.9		18.34	Q	3
920889	9	TN501	67.6	C	43.6	E	46.4	E		60.2		68.8	Q	53.7	*	9.43		94.9		97.9		18.34	Q	3
920890	10	W990002K1	75.8	B	47.8	E	63.1	C		58.8	*	70.4	Q	59.5		9.41		114.0		96.0		18.46	Q	4
920891	11	W980031K1	67.9	C	52.1	D	51.2	D		61.9		68.8	Q	55.3	*	9.63		112.6		99.2		18.59	Q	3
920892	12	W980031L1	66.5	C	33.9	F	67.4	C		60.1		68.6	Q	61.0		9.32		135.4		105.3		18.05	Q	2
920893	13	GA031238-DH7-7E34	86.6	A	48.0	E	48.3	E		59.5	*	72.6		54.3	*	9.36		129.4		97.0		18.47	Q	7
920894	14	GA001170-7E26	70.9	B	42.3	E	49.1	E		61.5		69.4	Q	54.6	*	9.13		117.1		102.2		18.30	Q	5
920895	15	GA001169-7E15	72.6	B	40.7	E	53.9	D		60.8		69.8	Q	56.3		8.61		121.3		100.6		18.25	Q	6
920896	16	GA001492-7E9	87.5	A	67.9	C	68.4	C		59.7	*	72.7		61.3		8.62		117.3		91.4		19.07		5
920897	17	MD01W233-07-1	70.1	B	30.0	F	54.1	D		61.5		69.3	Q	56.4		9.27		108.3		95.9		17.93	Q	4
920898	18	MD00W53-07-1	61.3	C	37.3	F	39.4	F		60.9		67.5	Q	51.2	Q	9.15		107.2		98.7		18.15	Q	4
920899	19	G89270	72.9	B	88.3	A	82.3	A		58.0	Q	69.8	Q	66.2		8.14		104.0		89.8		19.68		8
920900	20	G89283	64.7	C	54.2	D	77.1	B		58.1	Q	68.2	Q	64.4		8.31		134.0		99.0		18.66	*	3
920901	21	G89267	66.0	C	61.1	C	71.5	B		59.4	*	68.5	Q	62.4		8.16		110.4		94.1		18.86	*	7
920902	22	B040798	84.3	A	78.6	B	74.6	B		58.7	*	72.1		63.5		8.58		116.6		88.7		19.39		7
920903	23	D05-6189	66.3	C	65.3	C	68.5	C		57.8	Q	68.5	Q	61.4		8.75		108.4		92.0		18.99		3
920904	24	D05*6441	74.1	B	65.6	C	61.9	C		59.7	*	70.1	Q	59.1		8.88		128.3		93.1		19.00		6
920905	25	FL01029-K1	73.3	B	46.4	E	64.2	C		61.2		69.9	Q	59.9		8.97		121.3		99.2		18.42	Q	2
920906	26	Z03-0496	62.7	C	46.0	E	56.1	D		59.7	*	67.8	Q	57.1		9.35		102.8		98.5		18.41	Q	3
920907	27	ARS03-5358	72.3	B	75.4	B	57.8	D		60.5		69.7	Q	57.6		9.42		131.3		91.4		19.29		5

ADVANCED NURSERY EVALUATION

FOR SOFT WHEAT MILLING AND BAKING QUALITY

2009 CROP

Stephen Harrison - LSU

Warsaw, VA - Battle Ground, IN - Belle Mina, AL

2009 Uniform Southern Regional Soft Red Winter Wheat Nursery - Interior

STD = AGS 2000

LAB NO.	ENTRY NO.	ENTRY	MILLING QUALITY SCORE		BAKING QUALITY SCORE		SOFT. EQUIV. SCORE			MICRO T.W. LB/BU		FLOUR YIELD %		SOFT. EQUIV. %		FLOUR PROT. %		LACTIC ACID SRC		SUCROSE SRC %		COOKIE DIAM. CM.		TOP GR.
****	STD=	AGS 2000	85.91	A	69.87	C	62.91	C		60.95		72.43		59.43		9.11		104.53		92.71		19.13		3
920908	28	ARS05-0443	61.7	C	28.1	F	66.9	C		57.9	Q	67.6	Q	60.8		9.29		123.0		107.5		17.87	Q	1
920909	29	VA04W-90	68.1	C	48.2	E	68.8	C		60.7		68.9	Q	61.5		8.66		124.7		97.7		18.48	Q	3
920910	30	VA05W-139	63.4	C	35.5	F	55.2	D		60.8		67.9	Q	56.7		8.78		143.9		103.2		18.10	Q	4
920911	31	VA06W-392	68.4	C	66.8	C	60.7	C		60.2		68.9	Q	58.7		8.66		107.3		92.2		19.03		3
920912	32	VA05W-251	72.5	B	57.3	D	53.5	D		59.8		69.8	Q	56.1	*	8.70		106.4		95.6		18.75	*	5
920913	33	LA01034D-235-1	78.0	B	74.4	B	58.9	D		59.1	*	70.9	Q	58.0		8.71		111.7		92.0		19.26		7
920914	34	LA01029D-139-3	75.8	B	59.3	D	66.6	C		61.5		70.4	Q	60.7		8.85		120.6		97.4		18.81	*	3
920915	35	LA01139D-56-1	82.0	A	87.6	A	59.2	D		60.2		71.7		58.1		8.99		122.1		89.9		19.66		4
920916	36	AR96052-4-3	66.3	C	71.6	B	63.8	C		59.1	*	68.5	Q	59.8		8.84		127.6		94.9		19.18		3
920917	37	AR98088-1-1	72.1	B	67.9	C	54.1	D		60.5		69.7	Q	56.4		8.29		100.8		93.8		19.07		7
920918	38	NC05-21090	66.9	C	57.6	D	65.8	C		60.6		68.6	Q	60.4		8.98		127.0		98.4		18.76	*	3
920919	39	NC05-20276	60.2	C	37.1	F	54.6	D		61.1		67.3	Q	56.5		10.26	*	126.8		103.9		18.14	Q	3
920920	40	NC05-19684	69.1	C	67.3	C	64.6	C		60.7		69.1	Q	60.0		9.36		132.5		98.1		19.05		4
		average	71.68		56.15		61.08			60.13		69.59		58.79		8.98		118.83		96.99		18.72		4.38

ADVANCED EVALUATION

FOR SOFT WHEAT MILLING AND BAKING QUALITY

2009 CROP

Stephen Harrison - LSU

Warsaw, VA - Battle Ground, IN - Belle Mina, AL

2009 Uniform Southern Regional Soft Red Winter Wheat Nursery - Interior

LAB NO.	ENTRY NO.	ENTRY	FHB (0-3)	WEATHERING (Yes/No)	SPROUTING (0-3)	BLACK POINT (0-3)	SHRIVELING AFTER CLEANING (0-3)	COLOR	COMMENTS
920881	1	AGS 2000	1	n	n	1	1		
920882	2	Pioneer Brand 26R61	1-2	y	n	0	1		
920883	3	Coker 9553	1	n	n	0	1		
920884	4	USG 3555	1	y	n	1	1		
920885	5	MO011126	1	?	n	0	0		
920886	6	NC04-20814	1	n	n	0	0		
920887	7	LA01140D-70	1	y	n	1	1		
920888	8	TN802	1	n	n	0	1		
920889	9	TN501	1	?	n	0	0		
920890	10	W990002K1	1	n	n	0	1		
920891	11	W980031K1	1	n	n	1	1		
920892	12	W980031L1	1	y	n	1	1		
920893	13	GA031238-DH7-7E34	1	n	n	0	1		
920894	14	GA001170-7E26	1	n	n	0	1		
920895	15	GA001169-7E15	1	n	n	1	0		
920896	16	GA001492-7E9	1	?	n	1	1		
920897	17	MD01W233-07-1	1	n	n	2	1		
920898	18	MD00W53-07-1	1	?	n	1	1		
920899	19	G89270	1	n	n	0	0		
920900	20	G89283	1	y	n	1	0		
920901	21	G89267	1	n	n	0	0		
920902	22	B040798	1	n	n	0	0		
920903	23	D05-6189	1	y	n	0	1		
920904	24	D05*6441	1	n	n	0	1		
920905	25	FL01029-K1	1	n	n	0	2		
920906	26	Z03-0496	1	y	n	0	2		
920907	27	ARS03-5358	1	n	1	0	1		
920908	28	ARS05-0443	1	y	n	1	1		
920909	29	VA04W-90	1	n	1?	1	0		
920910	30	VA05W-139	1	n	n	0	1		
920911	31	VA06W-392	1	y	n	0	0		

GRAIN CONDITION SCALE

FHB, SPROUTING and BLACK POINT

0	None
1	up to 10%
2	10% to 40%
3	above 40%

SHRIVELING

0	None
1	Some
2	Moderate
3	Heavy

ADVANCED EVALUATION

FOR SOFT WHEAT MILLING AND BAKING QUALITY

2009 CROP

Stephen Harrison - LSU

Warsaw, VA - Battle Ground, IN - Belle Mina, AL

2009 Uniform Southern Regional Soft Red Winter Wheat Nursery - Interior

LAB NO.	ENTRY NO.	ENTRY	FHB	WEATHERING	SPROUTING	BLACK POINT	SHRIVELING AFTER CLEANING	COLOR	COMMENTS
			(0-3)	(Yes/No)	(0-3)	(0-3)	(0-3)		
920912	32	VA05W-251	1	n	n	0	1		
920913	33	LA01034D-235-1	1	y	n	1	1		
920914	34	LA01029D-139-3	1	n	n	0	2		
920915	35	LA01139D-56-1	1	n	n	1	1		
920916	36	AR96052-4-3	1	?	1	0	1		
920917	37	AR98088-1-1	1	n	n	0	0		
920918	38	NC05-21090	1	y?	n	0	1		
920919	39	NC05-20276	1	n	n	0	2		
920920	40	NC05-19684	1-2	n?	n	1	1		

GRAIN CONDITION SCALE

FHB, SPROUTING and BLACK POINT

0	None
1	up to 10%
2	10% to 40%
3	above 40%

SHRIVELING

0	None
1	Some
2	Moderate
3	Heavy

ADVANCED NURSERY
EVALUATION SUMMARY
2009 CROP

Stephen Harrison - LSU
Warsaw, VA - Battle Ground, IN - Belle Mina, AL
2009 Uniform Southern Regional Soft Red Winter Wheat Nursery - Interior

		STD.		AVG.	
		DATA		DATA	
MILLING QUALITY SCORE		85.91	A	71.68	
BAKING QUALITY SCORE		69.87	C	56.15	
SE SCORE		62.91	C	61.08	

		STD.		AVG.	ADJ.	NOTATION	
		DATA		DATA	L.S.D.	BEGINS	
						*	Q
TEST WEIGHT		60.95		60.13	1.18	59.77	58.59
FLOUR YIELD		72.43		69.59	0.78	71.65	70.88
SOFTNESS EQUIV.		59.43		58.79	3.20	56.24	53.04
FLOUR PROTEIN		9.11		8.98	0.74	9.85	10.58
SUCROSE SRC		92.71		96.99			
LACTIC ACID RETENTION		104.53		118.83			
COOKIE DIAMETER		19.13		18.72	0.26	18.87	18.62

		A	B	C	D	E	F	TOTAL
MILLING SCORE		7	12	21	0	0	0	
BAKING SCORE		3	5	9	6	9	8	40
SOFTNESS EQUIV. SCORE		1	3	19	12	4	1	

ADVANCED NURSERY EVALUATION
FOR SOFT WHEAT MILLING AND BAKING QUALITY
2009 Crop

Stephen Harrison - LSU

Warsaw, VA - Battle Ground, IN - Belle Mina, AL

2009 Uniform Southern Regional Soft Red Winter Wheat Nursery - Interior

ENTRY	MILLING QUALITY SCORE	BAKING QUALITY SCORE	SOFT. EQUIV. SCORE	TEST WT. LB/BU	ADJ. YIELD %	SOFT. EQUIV. %	FLOUR PROT. %	LACTIC ACID SRC	SUCROSE SRC %	COOKIE DIAM. CM.	TOP GR.
Nursery Average	71.68	56.15	61.08	60.13	69.59	58.79	8.98	118.83	96.99	18.72	4.38
Allis Database - AGS 2000	85.91	69.87	62.91	62.40	78.96		9.10	90.00		17.90	
AGS 2000	85.91	69.87	62.91	60.95	72.43	59.43	9.11	104.53	92.71	19.13	3.00
AGS 2000 - Average	79.25	54.34	69.13	62.81	72.14	57.59	8.86	103.34	92.31	17.87	3.82
AGS 2000 - Standard Deviation	7.09	13.41	10.25	2.55	1.05	3.41	0.63	6.81	2.64	0.44	1.24
Pioneer 26R61	69.91	36.15	48.72	62.33	69.24	54.46	9.65	113.53	97.47	18.12	3.00
Pioneer 26R61 - Average	68.35	43.99	62.56	62.50	69.58	55.19	9.26	109.68	92.79	17.49	3.33
Pioneer 26R61 - Standard Deviation	7.32	11.01	10.66	2.59	1.30	3.47	0.54	6.47	3.93	0.37	1.32
Coker 9553	63.38	51.98	64.77	61.02	67.94	60.08	9.42	127.59	95.87	18.59	4.00
Coker 9553 - Average	54.88	44.78	69.03	62.85	68.99	58.13	9.15	115.25	102.77	17.89	4.25
Coker 9553 - Standard Deviation	8.34	8.47	4.47	1.25	0.76	1.44	0.42	6.73	5.80	0.55	2.63

Conditional formatting set:

Blue = values less than two standard deviations from the mean of the database average

Black = values greater than two standard deviations from the mean of the database average

2009 Crop
Advanced Milling and Baking Evaluation
Set 2009 A03

UEWWN
Clay Sneller, Ohio State University
Entries # 920799 - 920840

A total of 42 samples were composited by the Soft Wheat Quality Laboratory (SWQL) from samples produced at Ohio State University in Wooster, Ohio, Agripro in Indiana, and University of Illinois, in Urbana, IL. The standard quality data was compared to the "historical average" for the cultivar Branson, and quality scores for all entries are adjusted to this average. Of the 831 cultivars in the SWQL database of Allis-milled cultivars, Branson ranks 503rd for Milling Score based on data from 1 milling. The following table compares the checks, Branson, Roane, and INW 0411, with their "historical data" from the Advanced Milling databases. We have coded in blue text the values for the checks that are within two standard deviations of the mean of the previous observations in the micro database for that cultivar. Values in black are outside of the normal range observed for the check cultivar.

The samples showed signs of FHB infected kernels but pre-harvest sprouting was not obviously present in this nursery. Weathering was detected but did not play a major factor within this nursery when compared with historical values for the checks. In this set, the test weights of the check standards were higher than average and had a decreased softness equivalent percentage. They also had lower than average gluten strength, based on the lactic acid SRC values. Sucrose SRC, in general, was lower than normal, causing an increase in cookie diameter. Branson, Roane, and INW 0411 was consistent with the historical data from the advanced milling data set as it was within two standard deviations of the mean of its Micro-milling database average. The values for flour quality measures among the checks were consistent with expectations from previous evaluations and the relative rankings of the cultivar. Therefore, we expect the results of the evaluations to be predictive of future performance of these breeding lines.

UEWWN

ENTRY	MILLING QUALITY SCORE	BAKING QUALITY SCORE	SOFT. EQUIV. SCORE	TEST WT. LB/BU	ADJ. YIELD %	SOFT. EQUIV. %	FLOUR PROT. %	LACTIC ACID SRC %	SUCROSE SRC %	COOKIE DIAM. CM.	TOP GRADE
Nursery Average	57.81	43.68	60.04	61.76	70.05	56.45	8.63	105.17	96.21	18.54	5.69
Allis Database - Branson	64.36	55.00	74.57	60.20	76.39		8.24	95.70		17.45	
Branson	64.36	55.00	74.57	61.29	71.35	61.54	8.29	109.47	88.71	18.88	7.00
Branson - Average	67.08	67.94	80.99	60.78	71.11	63.24	8.27	112.08	89.51	18.57	5.47
Branson - Standard Deviation	6.24	13.16	4.50	2.15	0.78	2.57	0.55	9.10	7.14	0.63	1.22
Roane	51.80	30.48	63.92	63.75	68.85	57.81	8.53	113.82	97.84	18.14	6.00
Roane - Average	59.82	40.32	72.54	63.75	69.09	59.43	8.64	116.23	99.06	17.51	3.26
Roane - Standard Deviation	6.14	14.51	5.65	2.74	1.27	2.36	0.67	9.89	6.41	0.57	1.33
INW 0411	59.88	39.74	57.58	60.61	70.46	55.59	8.91	95.24	97.69	18.42	6.00
INW 0411 - Average	66.78	48.93	64.87	59.80	69.63	56.74	8.91	100.84	92.33	17.72	4.00
INW 0411 - Standard Deviation	6.36	15.96	8.30	2.67	1.19	3.25	0.90	6.92	4.13	0.42	1.20

Conditional formatting set:

Blue = values less than two standard deviations from the mean of the database average

Black = values greater than two standard deviations from the mean of the database average

Comments from Ed Souza

The Uniform Eastern Soft Red Winter Wheat Nursery represents one of the last stages of testing by wheat breeding programs before release of a breeding line as a new cultivar. In this trial, a composite of grain samples from three locations representative of the region were evaluated for milling and baking quality using methods approved by the American Association of Cereal Chemists.

Flour yield is commonly the most heritable trait evaluated by the SWQL. In this nursery, Roane had a flour yield of 68.8%. Breeding lines with flour yield similar or less than Roane, should be viewed as having poor milling quality. Lines with flour yield more than a percentage point less than Roane are likely unacceptable for commercial milling. The second most heritable trait evaluated by the SWQL is softness equivalent. Softness equivalent is a predictor of break flour yield. It also is a measure of flour particle size as it is estimated as the percent of break flour passing through a standard 94 mesh screen. Larger values are preferred for most soft wheat products, particularly cakes and other high sugar baked products. All of the breeding lines in the nursery were true soft genotypes as graded by the softness equivalent. For commercial use, Bess is typically a low softness equivalent genotype and had a softness equivalent of 51.6%. Cultivars with softness equivalents similar or less than Bess may not be acceptable for use in cake flours.

Selecting sequentially for the following traits, greater flour yield, greater softness equivalent, smaller values of sucrose SRC, and larger cookie diameter identifies the following lines: KY97C-0519-04-07, IL04-11003, G89209, G89201, B040798, W06-089, and W06-522A. These are the best quality soft wheat lines in the nursery for general use in the widest range of soft wheat products. They have value both as potential cultivars but also as breeding parents for subsequent improvement of the soft winter wheat germplasm pool.

Lactic acid SRC is a measure of the strength of the native glutenin macro-polymer in flour. Although many soft wheat products do not require excess gluten strength, most commercial food production requires some gluten strength. Therefore very weak gluten strength lines (below 85% in this evaluation) would cause problems for the manufacturers if they dominated the grain production of a region. Currently most soft wheat cultivars are in a middle range between Bess and Branson for gluten strength. A few genotypes in this trial were exceptionally strong for glutenin, as measured by lactic acid SRC. The strongest of these were KY97C-0508-01-01A-1 and OH04-264-58. These lines may have added value for the production of crackers, due to the extra gluten strength. OH04-264-58 in previous studies has been shown to carry, the strongest high molecular weight glutenin alleles at the *Glu-1B* and *Glu-1D* loci, the $Glu\text{-}1D_{al}$ and $Glu\text{-}1D_{d}$, respectively (the Bx-7 overexpressed allele and the 5+10 allele).

Please contact me if you have questions concerning the evaluations of this trial.

Best regards,
Edward Souza

ADVANCED NURSERY EVALUATION

FOR SOFT WHEAT MILLING AND BAKING QUALITY

2009 CROP

Rich Minyo - Ohio State University

Wooster, OH

OWPT

STD = Hopewell

LAB NO.		Marketer	ENTRY	MILLING QUALITY SCORE		BAKING QUALITY SCORE		SOFT. EQUIV. SCORE			MICRO T.W. LB/BU		FLOUR YIELD %		SOFT. EQUIV. %		FLOUR PROT. %		LACTIC ACID SRC		SUCROSE SRC %		COOKIE DIAM. CM.		TOP GR.		WATER SRC	SODIUM CARB SRC
****	STD=	Public	Hopewell	55.60	D	71.43	B	76.82	B		62.33		68.30		59.79		8.07		121.12		88.54		18.72		4		54.54	69.94
920032	232	AGI	105	66.6	C	94.5	A	73.8	B		62.1		70.5		58.7		7.66		107.4		83.2		19.41		7		52.11	66.18
920036	236	AGI	106	58.1	D	82.5	A	75.1	B		63.9		68.8		59.2		8.54		116.9		87.0		19.05		6		53.14	69.79
920055	255	AGI	402	68.6	C	83.1	A	47.2	E		63.6		70.9		49.4	Q	8.57		113.2		86.8		19.07		4		54.94	66.62
920071	271	AGI	401	59.4	D	78.1	B	65.4	C		61.5		69.1		55.8	*	8.51		130.6		89.0		18.92		4		54.42	67.01
920076	276	AGI	205	72.8	B	40.4	E	72.1	B		62.1		71.7		58.2		8.48		107.3		86.7		17.79	Q	3		51.39	66.26
920003	203	AGRA	Rubin	58.4	D	86.8	A	64.5	C		62.0		68.9		55.5	*	8.74	*	122.7		86.7		19.18		6		51.13	65.99
920031	231	AGRA	Shaver	61.5	C	51.2	D	57.3	D		64.1		69.5		53.0	Q	9.00	*	103.6		89.4		18.12	Q	5		54.40	67.30
920034	234	AGRA	Mingo	66.5	C	46.3	E	57.5	D		64.4		70.5		53.0	Q	8.73	*	83.8		88.8		17.97	Q	0		56.41	70.79
920044	244	AGRA	Trevor	53.2	D	64.5	C	61.5	C		61.8		67.8		54.4	*	8.26		106.8		86.9		18.51		4		54.45	69.89
920047	247	AGRA	Arena	58.4	D	84.1	A	65.0	C		62.8		68.9		55.7	*	7.84		119.1		88.6		19.10		4		54.16	70.82
920062	262	AGRA	Silas	69.5	C	82.1	A	70.2	B		61.7		71.1		57.5		8.30		99.3		84.3		19.04		4		51.71	65.99
920067	267	AGRA	Mocha	59.4	D	69.5	C	73.6	B		62.9		69.1		58.7		8.62		103.0		86.3		18.66		3		51.72	67.23
920005	205	AgriPro	M03-3104B	55.6	D	86.2	A	55.9	D		62.6		68.3		52.5	Q	8.72	*	87.9		87.8		19.16		4		54.28	66.64
920014	214	AgriPro	M04-4566	70.8	B	72.2	B	71.8	B		63.0		71.3		58.0		8.27		104.1		92.5		18.75		5		55.29	70.59
920021	221	AgriPro	Branson	65.2	C	64.0	C	79.6	B		62.7		70.2		60.8		8.02		110.7		86.9		18.50		2		52.31	69.11
920029	229	AgriPro	W1377	56.9	D	69.7	C	58.6	D		65.6		68.6		53.4	*	7.94		117.9		91.1		18.67		6		55.88	73.71
920017	217	Beck	113	48.5	E	60.7	C	71.2	B		64.9		66.9	*	57.8		7.93		111.5		95.8		18.40	*	4		60.04	75.60
920026	226	Beck	137	55.2	D	60.9	C	46.1	E		64.3		68.2		49.0	Q	8.36		122.4		95.4		18.41	*	6		56.41	69.32
920030	230	Beck	122	74.2	B	56.1	D	75.8	B		62.4		72.0		59.5		8.05		103.4		85.6		18.26	*	1		52.57	66.11
920054	254	Beck	164	72.1	B	44.6	E	70.9	B		61.4		71.6		57.7		7.48		114.3		87.6		17.92	Q	3		52.82	66.73
920037	237	Buckeye	Lucas	63.5	C	67.7	C	66.9	C		62.2		69.9		56.3	*	8.16		130.2		90.2		18.61		4		53.93	68.31
920004	204	Dyna-Gro	V9723	76.5	B	94.1	A	77.3	B		62.9		72.5		60.0		7.88		102.5		87.5		19.40		5		52.81	65.06
920007	207	Dyna-Gro	Shirley	67.4	C	96.7	A	67.2	C		62.6		70.6		56.4	*	8.20		96.0		89.7		19.48		7		56.63	71.12
920016	216	Dyna-Gro	9922	61.1	C	52.8	D	71.0	B		64.7		69.4		57.8		8.37		106.3		90.9		18.16	Q	4		56.54	69.17
920038	238	Dyna-Gro	9911	55.4	D	65.9	C	46.6	E		64.6		68.3		49.2	Q	8.31		121.4		94.2		18.56		3		55.87	69.03
920058	258	Dyna-Gro	V9812	69.1	C	39.8	F	66.8	C		64.3		71.0		56.3	*	8.38		98.7		86.7		17.77	Q	2		53.01	69.15
920018	218	Ebberts	570	73.8	B	74.0	B	77.5	B		61.9		71.9		60.0		7.95		102.5		87.9		18.80		3		53.18	65.85
920049	249	Ebberts	595	76.5	B	85.8	A	65.3	C		64.8		72.5		55.8	*	8.15		116.9		83.6		19.15		4		50.95	64.26
920050	250	Ebberts	590	56.3	D	48.3	E	43.2	E		64.8		68.4		48.0	Q	8.61		125.4		94.5		18.03	Q	4		55.89	70.45
920070	270	Ebberts	501	56.3	D	64.5	C	49.6	E		64.3		68.4		50.3	Q	8.61		123.1		92.8		18.51		4		55.18	68.70
920011	211	Excel	442	72.0	B	54.4	D	51.0	D		63.6		71.6		50.8	Q	8.75	*	113.3		88.7		18.21	Q	4		56.36	66.89
920046	246	Excel	286	72.7	B	61.6	C	75.4	B		63.4		71.7		59.3		8.30		98.8		82.9		18.43	*	3		52.45	66.85
920063	263	Excel	234	65.4	C	41.5	E	59.9	D		64.7		70.3		53.9	*	8.07		107.6		85.3		17.82	Q	4		55.43	68.68
920069	269	Excel	367	65.9	C	35.7	F	75.5	B		63.3		70.4		59.3		8.76	*	116.5		89.9		17.65	Q	2		51.35	67.56
920010	210	Genesis	RO65	73.3	B	103.3	A	81.0	A		64.5		71.8		61.3		8.07		96.0		85.7		19.68		7		55.54	70.61

ADVANCED NURSERY EVALUATION

FOR SOFT WHEAT MILLING AND BAKING QUALITY

2009 CROP

Rich Minyo - Ohio State University

Wooster, OH

OWPT

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LAB NO.		Marketer	ENTRY	MILLING QUALITY SCORE		BAKING QUALITY SCORE		SOFT. EQUIV. SCORE			MICRO T.W. LB/BU		FLOUR YIELD %		SOFT. EQUIV. %		FLOUR PROT. %		LACTIC ACID SRC		SUCROSE SRC %		COOKIE DIAM. CM.		TOP GR.		WATER SRC	SODIUM CARB SRC
****	STD=	Public	Hopewell	55.60	D	71.43	B	76.82	B		62.33		68.30		59.79		8.07		121.12		88.54		18.72		4		54.54	69.94
920043	243	Genesis	RO45	71.2	B	99.0	A	82.7	A		64.4		71.4		61.8		7.60		94.1		84.8		19.55		5		56.19	72.19
920027	227	Gries	Beuerlein	73.5	B	78.4	B	76.8	B		62.2		71.9		59.8		7.88		103.2		85.3		18.93		3		53.36	66.59
920053	253	Gries	Rattler	58.0	D	62.7	C	66.5	C		62.7		68.8		56.2	*	8.61		127.3		92.4		18.46	*	4		52.64	67.87
920039	239	MCIA	Red Ruby	68.0	C	50.2	D	82.6	A		63.2		70.8		61.8		8.12		111.1		86.1		18.08	Q	1		52.60	68.10
920006	206	Pioneer Brand	25R39	62.0	C	66.0	C	69.2	C		63.2		69.6		57.1		7.82		98.3		90.3		18.56		4		56.50	72.67
920033	233	Pioneer Brand	25R56	64.2	C	83.1	A	57.7	D		62.4		70.0		53.1	Q	7.60		87.8		84.7		19.07		6		53.85	65.88
920059	259	Pioneer Brand	25R62	70.2	B	50.4	D	71.0	B		61.7		71.2		57.8		8.00		104.0		87.9		18.09	Q	3		52.34	66.79
920064	264	Pioneer Brand	25R47	72.3	B	78.3	B	79.5	B		62.1		71.6		60.7		8.05		105.7		85.1		18.93		3		51.53	66.09
920052	252	Pro. Certified	Sunburst	43.1	E	21.2	F	48.6	E		65.6		65.8	Q	49.9	Q	8.41		111.9		97.8		17.21	Q	3		57.86	76.87
920061	261	Pro. Certified	Bravo	65.1	C	76.3	B	59.3	D		64.7		70.2		53.7	*	8.61		98.2		91.2		18.87		5		54.06	66.58
920008	208	Pub. Certified	Roane	57.4	D	71.3	B	67.0	C		66.0		68.7		56.4	*	8.62		121.5		96.0		18.72		6		57.85	72.71
920019	219	Pub. Certified	Hopewell	55.6	D	71.4	B	76.8	B		62.3		68.3		59.8		8.07		121.1		88.5		18.72		4		54.54	69.94
920020	220	Pub. Certified	Hopewell Gaucho	55.4	D	57.0	D	73.9	B		62.3		68.3		58.8		8.34		116.7		88.0		18.29	*	2		54.04	69.83
920057	257	Pub. Certified	Malabar	66.3	C	66.6	C	67.5	C		63.0		70.4		56.5	*	8.02		116.3		86.4		18.58		4		55.14	70.26
920066	266	Pub. Certified	Truman	60.2	C	77.1	B	55.8	D		64.1		69.2		52.4	Q	8.71		107.7		87.7		18.89		4		54.04	68.32
920079	279	Pub. Certified	Freedom	54.0	D	69.7	C	62.5	C		61.1	*	68.0		54.8	*	8.15		97.6		84.3		18.67		4		53.88	66.67
920012	212	Rupp	9xp51	70.6	B	79.3	B	46.9	E		63.8		71.3		49.3	Q	8.95	*	107.8		84.9		18.96		6		54.49	67.50
920060	260	Rupp	RS 908	72.3	B	36.9	F	64.5	C		64.3		71.6		55.5	*	8.57		101.9		86.5		17.68	Q	3		53.36	69.25
920068	268	Rupp	9xp34	53.9	D	52.4	D	47.2	E		64.4		68.0		49.4	Q	8.34		124.2		95.3		18.15	Q	4		56.38	67.88
920072	272	Rupp	RS 978	72.8	B	40.3	E	72.0	B		62.1		71.7		58.1		8.52		106.8		86.5		17.79	Q	2		50.87	65.97
920001	201	Seed Consultants	SC 1298	76.3	B	96.0	A	78.8	B		62.7		72.4		60.5		8.13		101.5		87.4		19.46		5		52.37	66.68
920002	202	Seed Consultants	SC 1348	70.5	B	101.3	A	78.3	B		63.3		71.3		60.3		8.34		102.8		84.4		19.62		6		52.73	67.51
920035	235	Seed Consultants	SC 1358	63.2	C	53.8	D	68.9	C		61.8		69.8		57.0		8.53		119.7		90.1		18.19	Q	2		53.32	68.35
920041	241	Seed Consultants	SC 1318	68.6	C	44.6	E	66.2	C		64.2		70.9		56.1	*	8.36		97.3		84.3		17.92	Q	2		53.90	68.66
920042	242	Seed Consultants	SC 1325	57.5	D	74.0	B	49.6	E		64.9		68.7		50.3	Q	8.57		118.4		91.7		18.80		5		54.68	67.68
920045	245	Seed Consultants	SC 1328B	59.1	D	47.0	E	75.6	B		64.4		69.0		59.4		7.95		108.6		89.1		17.99	Q	1		55.67	69.17
920051	251	Seed Consultants	SC 1339	51.1	D	91.5	A	91.4	A		61.8		67.4	*	64.9		7.55		96.7		88.8		19.32		3		54.63	71.24
920048	248	Shur Grow	SG-1557	73.6	B	93.7	A	76.8	B		62.1		71.9		59.8		7.90		102.6		84.8		19.39		4		51.81	66.37
920078	278	Shur Grow	SG-1567	60.2	C	41.8	E	64.4	C		61.6		69.2		55.4	*	8.57		128.7		87.7		17.83	Q	2		52.14	67.56
920015	215	Steyer	EXP 3223	62.1	C	-30.2	F	12.3	F		64.4		69.6		37.2	Q	8.90	*	130.2		106.6		15.67	Q	0		66.41	86.02
920023	223	Steyer	EXP 71EJS4	48.9	E	76.0	B	87.2	A		62.9		67.0	*	63.4		8.18		120.1		93.4		18.86		5		54.13	72.68
920028	228	Steyer	Jordan	55.0	D	45.7	E	47.9	E		64.6		68.2		49.7	Q	8.35		119.4		94.0		17.95	Q	6		56.27	68.79
920065	265	Steyer	Fatzinger	74.0	B	47.2	E	73.7	B		62.4		72.0		58.7		8.11		102.9		87.3		17.99	Q	1		52.46	66.66
920073	273	Steyer	Nafzinger	67.4	C	49.9	E	76.3	B		60.7	*	70.7		59.6		7.57		116.5		89.8		18.07	Q	3		53.70	69.27
920075	275	Steyer	Geary	51.3	D	86.1	A	87.1	A		62.1		67.4	*	63.4		8.19		99.5		89.9		19.16		3		51.81	69.25

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2009 CROP

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****	STD=	Public	Hopewell	55.60	D	71.43	B	76.82	B		62.33		68.30		59.79		8.07		121.12		88.54		18.72		4		54.54	69.94
920080	280	Steyer	Exp 901804	45.4	E	64.5	C	58.3	D		61.6		66.3	Q	53.3	Q	8.33		102.9		90.6		18.51		4		55.98	69.97
920009	209	Va. Tech	VA04W-259	67.0	C	94.2	A	63.0	C		64.1		70.6		55.0	*	8.62		104.1		90.1		19.41		6		52.09	64.67
920022	222	Va. Tech	VA04W-90	60.5	C	40.8	E	73.6	B		64.2		69.3		58.7		8.46		121.7		91.6		17.80	Q	4		54.85	71.32
920024	224	Va. Tech	VA03W-412	69.1	C	66.0	C	63.9	C		65.1		71.0		55.3	*	8.58		105.9		88.8		18.56		5		54.95	71.51
920013	213	Wellman	W 123	75.4	B	62.8	C	84.3	A		62.7		72.2		62.4		8.15		119.9		85.9		18.46	*	2		52.15	68.32
920040	240	Wellman	W 122	70.4	B	82.8	A	62.7	C		64.7		71.3		54.9	*	8.56		96.9		85.5		19.06		6		53.27	68.23
920056	256	Wellman	W X09	45.6	E	36.0	F	50.2	D		65.8		66.3	Q	50.5	Q	8.70		107.4		97.8		17.66	Q	3		59.56	76.62
920074	274	Wellman	W 132	73.6	B	42.7	E	74.3	B		62.1		71.9		58.9		8.19		105.4		87.5		17.86	Q	3		51.85	66.25
920077	277	Wellman	W 121	69.7	C	33.5	F	65.1	C		64.4		71.1		55.7	*	8.67		102.9		86.3		17.58	Q	2		52.55	66.96
			average	63.79		64.29		66.55			63.28		69.93		56.20		8.29		109.60		88.90		18.51		3.80		54.22	68.92

ADVANCED EVALUATION
FOR SOFT WHEAT MILLING AND BAKING QUALITY
2009 CROP
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GRAIN CONDITION SCALE

FHB, SPROUTING and BLACK POINT

0	None
1	up to 10%
2	10% to 40%
3	above 40%

SHRIVELING

0	None
1	Some
2	Moderate
3	Heavy

SAMPLE NO.	ENTRY	FHB	WEATHERING	SPROUTING	BLACK POINT	SHRIVELING AFTER CLEANING	COMMENTS
		(0-3)	(Yes/No)	(0-3)	(0-3)	(0-3)	
201	SC 1298	1	N	0	2	0	0
202	SC 1348	1	Y	0	2	0	0
203	Rubin	1	?	0	1	0	0
204	V9723	1	?	0	2-?	0	0
205	M03-3104B	1-?	Y	0	2	0	0
206	25R39	1	Y	0	2	0	0
207	Shirley	1-?	Y	0	2-?	0	0
208	Roane	1-?	Y	0	2	0	0
209	VA04W-259	1	N	0	2	1	0
210	RO65	1	Y	0	3	0	0
211	442.00	1	Y	0	3	0	0
212	9xp51	1	Y	0	3	0	0
213	W 123	1	N	0	2	1	0
214	M04-4566	1-?	Y	0	3	0	0
215	EXP 3223	1-?	Y	0	2	0	0
216	9922.00	1	Y	0	2	0	0
217	113.00	1	Y	0	2	0	0
218	570.00	1	N	0	2	0	0
219	Hopewell	1-?	Y	0	1	0	0
220	Hopewell Gaucho	1-?	Y	0	1	1	0
221	Branson	1	N	0	1	0	0
222	VA04W-90	1	Y	0	2	0	0
223	EXP 71EJS4	1	N	0	1	0	0
224	VA03W-412	1-?	N	0	2	0	0
225	Bromfield	1	?	0	1	0	0
226	137.00	1	N	0	2(?)	0	0
227	Beuerlein	1	N	0	2	0	0
228	Jordan	1	N	0	2	0	0
229	W1377	2	Y	0	2	0	0
230	122.00	1	N	0	2	0	0
231	Shaver	2	Y	0	2	0	0

ADVANCED EVALUATION
FOR SOFT WHEAT MILLING AND BAKING QUALITY
2009 CROP
Rich Minyo - Ohio State University
Wooster, OH
OWPT

GRAIN CONDITION SCALE

FHB, SPROUTING and BLACK POINT

0	None
1	up to 10%
2	10% to 40%
3	above 40%

SHRIVELING

0	None
1	Some
2	Moderate
3	Heavy

SAMPLE NO.	ENTRY	FHB	WEATHERING	SPROUTING	BLACK POINT	SHRIVELING AFTER CLEANING	COMMENTS
		(0-3)	(Yes/No)	(0-3)	(0-3)	(0-3)	
232	105.00	1-?	Y	0	1	0	0
233	25R56	1	N	0	1	0	0
234	Mingo	1-?	Y	0	2	1	0
235	SC 1358	1-?	Y	0	2	0	0
236	106.00	1-?	Y	0	1	0	0
237	Lucas	1	Y	0	2	0	0
238	9911.00	1	N	0	1-?	0	0
239	Red Ruby	1-?	Y	0	2	0	0
240	W 122	1-?	Y	0	1-?	0	0
241	SC 1318	1-?	Y	0	2	0	0
242	SC 1325	1-?	Y	0	2	0	0
243	RO45	2	Y	0	3	0	0
244	Trevor	2(?)	Y	0	2	1	0
245	SC 1328B	1	Y	0	2	0	0
246	286.00	1	?	0	2-?	0	0
247	Arena	2	Y	0	2	0	0
248	SG-1557	1	N	0	2	0	0
249	595.00	1	N	0	2-?	0	0
250	590.00	1	N	0	2(?)	0	0
251	SC 1339	1	Y	0	2	0	0
252	Sunburst	1-?	Y	0	2	0	0
253	Rattler	1-?	Y	0	2	0	0
254	164.00	1	?	0	1	0	Few white
255	402.00	1-?	Y	0	3	0	0
256	W X09	1	Y	0	2	0	0
257	Malabar	1	N	0	1-?	0	0
258	V9812	1	N	0	2(?)	0	0
259	25R62	1	Y	0	1	0	0
260	RS 908	1-?	?	0	2(?)	0	0
261	Bravo	2	Y	0	2-?	0	0
262	Silas	1-?	N	0	2(?)	0	0

ADVANCED EVALUATION
FOR SOFT WHEAT MILLING AND BAKING QUALITY
2009 CROP
Rich Minyo - Ohio State University
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OWPT

GRAIN CONDITION SCALE

FHB, SPROUTING and BLACK POINT

0	None
1	up to 10%
2	10% to 40%
3	above 40%

SHRIVELING

0	None
1	Some
2	Moderate
3	Heavy

SAMPLE NO.	ENTRY	FHB	WEATHERING	SPROUTING	BLACK POINT	SHRIVELING AFTER CLEANING	COMMENTS
		(0-3)	(Yes/No)	(0-3)	(0-3)	(0-3)	
263	234.00	1	N	0	2	0	0
264	25R47	2	Y	0	2	1	0
265	Marion	2	?	0	2	0	0
266	Truman	1	Y	0	2	0	0
267	Mocha	2	Y	0	1	0	0
268	9xp34	2(?)	Y	0	2(?)	0	0
269	367.00	1	Y	0	1-?	0	0
270	501.00	2(?)	Y	0	2	0	0
271	401.00	1-?	Y	0	?	0	0
272	RS 978	2(?)	Y	0	2	0	0
273	Nafzinger	1	Y	0	1	0	0
274	W 132	1-?	N	0	2	0	0
275	Geary	1-?	Y	0	1-?	0	0
276	205.00	1	Y	0	2	0	0
277	W 121	1-?	Y	0	2	0	0
278	SG-1567	1-?	Y	0	2	0	0
279	Freedom	2(?)	Y	0	2	0	0
280	Exp 901804	1-?	Y	0	1-?	0	0

ADVANCED NURSERY
EVALUATION SUMMARY
2009 CROP

Rich Minyo - Ohio State University
Wooster, OH
OWPT

		STD.		AVG.	
		DATA		DATA	
MILLING QUALITY SCORE		55.60	D	63.79	
BAKING QUALITY SCORE		71.43	B	64.29	
SE SCORE		76.82	B	66.55	

		STD.		AVG.	ADJ.	NOTATION	
		DATA		DATA	L.S.D.		BEGINS
						*	Q
TEST WEIGHT		62.33		63.28	1.21	61.13	59.92
FLOUR YIELD		68.30		69.93	0.73	67.57	66.83
SOFTNESS EQUIV.		59.79		56.20	3.22	56.58	53.36
FLOUR PROTEIN		8.07		8.29	0.65	8.72	9.37
SUCROSE SRC		88.54		88.90			
LACTIC ACID SRC		121.12		109.60			
COOKIE DIAMETER		18.72		18.51	0.25	18.47	18.22

		A	B	C	D	E	F	TOTAL
MILLING SCORE		0	24	28	23	5	0	
BAKING SCORE		20	12	17	9	15	7	80
SOFTNESS EQUIV. SCORE		7	30	21	11	10	1	

Rich Minyo - Ohio State University

Wooster, OH

OWPT

ENTRY	MILLING	BAKING	SOFT.	TEST	ADJ.	SOFT.	FLOUR
	QUALITY	QUALITY	EQUIV.	WT.	YIELD	EQUIV.	PROT.
	SCORE	SCORE	SCORE	LB/BU	%	%	%
OWPT Nusery Average	63.79	64.29	66.55	63.28	69.93	56.20	8.29

ADVANCED NURSERY EVALUATION

FOR SOFT WHEAT MILLING AND BAKING QUALITY

2009 CROP

Clay Sneller - Ohio State University

Wooster, OH

UEWWN

STD = Branson

LAB NO.	ENTRY NO.	ENTRY	MILLING QUALITY SCORE		BAKING QUALITY SCORE		SOFT. EQUIV. SCORE			MICRO T.W. LB/BU		FLOUR YIELD %		SOFT. EQUIV. %		FLOUR PROT. %		LACTIC ACID SRC		SUCROSE SRC %		COOKIE DIAM. CM.		TOP GR.
****	STD=	Branson	64.36	C	55.00	D	74.57	B		61.29		71.35		61.54		8.29		109.47		88.71		18.88		7.00
920826	28	P.05219A1-13-16	60.3	C	43.8	E	58.0	D		61.0		70.5	*	55.7	*	8.41		86.9		98.7		18.54	*	7
920827	29	W06-089	60.2	C	65.1	C	66.6	C		62.4		70.5	*	58.7		8.14		111.1		92.3		19.18		6
920828	30	W06-522A	59.9	D	55.9	D	65.9	C		60.5		70.5	*	58.5		8.15		114.3		91.3		18.90		4
920829	31	Z03-1281	67.8	C	30.1	F	77.0	B		60.7		72.0		62.4		8.07		113.0		93.0		18.13	Q	6
920830	32	Z03-0496	46.2	E	35.8	F	59.0	D		60.8		67.7	Q	56.1	*	8.64		98.3		102.5		18.30	Q	4
920831	33	GA031238-DH7-7A28	60.6	C	29.9	F	47.8	E		63.0		70.6		52.2	Q	9.30	*	118.2		98.5		18.12	Q	4
920832	34	BLAZER	58.2	D	68.7	C	54.3	D		61.8		70.1	*	54.4	Q	8.72		95.0		92.1		19.29		7
920833	35	PROBE	52.7	D	60.3	C	69.1	C		62.2		69.0	Q	59.6		8.97	*	100.0		95.9		19.04		6
920834	36	RUMUR	63.7	C	57.9	D	66.3	C		60.2		71.2		58.6		8.39		119.1		98.1		18.96		5
920835	37	VA05W-151	59.6	D	38.5	F	48.4	E		64.7		70.4	*	52.4	Q	8.82		114.7		102.9		18.38	*	7
920836	38	VA05W-168	57.7	D	45.5	E	55.2	D		63.6		70.0	*	54.7	Q	8.79		98.0		100.0		18.59	*	6
920837	39	VA05W-258	50.8	D	8.8	F	56.7	D		60.8		68.6	Q	55.3	*	8.64		118.5		104.6		17.49	Q	5
920838	40	AR98022-19-3	47.4	E	33.8	F	37.8	F		62.3		68.0	Q	48.7	Q	9.51	*	103.3		98.1		18.24	Q	5
920839	41	AR98023-5-1	57.6	D	57.2	D	60.5	C		61.5		70.0	*	56.6	*	8.63		80.4		95.6		18.94		6
920840	42	NC05-21090	55.4	D	36.1	F	61.1	C		62.8		69.6	Q	56.8	*	8.65		113.4		98.2		18.31	Q	7
		average	57.81		43.68		60.04			61.76		70.05		56.45		8.63		105.17		96.21		18.54		5.69

ADVANCED EVALUATION

FOR SOFT WHEAT MILLING AND BAKING QUALITY

2009 CROP

Clay Sneller - Ohio State University

Wooster, OH

UEWWN

GRAIN CONDITION SCALE

FHB, SPROUTING and BLACK POINT

0	None
1	up to 10%
2	10% to 40%
3	above 40%

SHRIVELING

0	None
1	Some
2	Moderate
3	Heavy

LAB NO.	ENTRY NO.	ENTRY	FHB (0-3)	WEATHERING (Yes/No)	SPROUTING (0-3)	BLACK POINT (0-3)	SHRIVELING AFTER CLEANING (0-3)	COLOR	COMMENTS
920799	1	ROANE	1	n	0	0	0	red	most FHB from IL
920800	2	INW0411	1	y	0	0	1	red	
920801	3	BRANSON	1	y	0	0	0	red	most FHB from IL
920802	4	BESS	1	y	0	0	0	red	
920803	5	LA01*425	1	y	0	0	0	red	
920804	6	IL02-19463	1	y	0	0	0	red	most FHB from IL
920805	7	B030543	0	y	1	0	0	red	sprout from IL
920806	8	KY97C-0321-02-01	1	y	0	0	1	red	most FHB from IL
920807	9	KY97C-0519-04-07	1	y	1	0	1	red	
920808	10	KY97C-0508-01-01A-1	1	y	0	1	0	red	most FHB from IL; most BL pt from Agripro
920809	11	IL04-8445	1	y	0	0	0	red	
920810	12	IL04-11003	1	n	0	1	0	red	
920811	13	OH04-264-58	1	y	0	0	1	red	
920812	14	OH04-268-39	1	y	0	0	1	red	most FHB from IL
920813	15	OH05-248-38	1	y	0	0	1	red	most FHB from IL
920814	16	MD00W53-07-1	0	n	0	2	2	red	BL pt in all 3 groups
920815	17	MD01W233-07-1	0	n	0	2	1	red	BL pt in all 3 groups
920816	18	G89209	0	y	0	0	1	red	
920817	19	G89201	0	n	0	1	0	red	
920818	20	G89222	0	y	0	0	0	red	
920819	21	M05-1172	1	y	0	0	1	red	most FHB from IL
920820	22	M05-1526	0	y	0	0	1	red	
920821	23	M05*1589	1	n	0	0	0	red	
920822	24	B040798	1	y	0	0	0	red	
920823	25	M05-1531	0	y	0	0	1	red	
920824	26	P.99751RA1-6-3-94	0	y	0	0	1	red	
920825	27	P.02444A1-23-1	0	y	0	0	1	red	
920826	28	P.05219A1-13-16	0	y	0	0	1	red	
920827	29	W06-089	0	y	0	1	1	red	most BL pt from Agripro
920828	30	W06-522A	0	y	0	0	1	red	
920829	31	Z03-1281	1	y	0	0	1	red	most FHB from IL
920830	32	Z03-0496	0	y	0	0	2	red	missing sample from AgriPro
920831	33	GA031238-DH7-7A28	1	y	0	1	2	red	
920832	34	BLAZER	1	y	0	0	1	red	most FHB from IL
920833	35	PROBE	0	y	0	0	0	red	
920834	36	RUMUR	0	y	0	0	1	red	
920835	37	VA05W-151	1	n	0	1	1	red	most FHB from IL
920836	38	VA05W-168	0	n	0	1	1	red	
920837	39	VA05W-258	1	y	0	0	0	red	
920838	40	AR98022-19-3	0	y	0	0	2	red	
920839	41	AR98023-5-1	1	y	0	0	1	red	
920840	42	NC05-21090	1	y	0	0	1	red	

ADVANCED NURSERY
EVALUATION SUMMARY
2009 CROP

Clay Sneller - Ohio State University
Wooster, OH
UEWWN

		STD.		AVG.	
		DATA		DATA	
MILLING QUALITY SCORE		64.36	C	57.81	
BAKING QUALITY SCORE		55.00	D	43.68	
SE SCORE		74.57	B	60.04	

		STD.		AVG.	ADJ.	NOTATION	
		DATA		DATA	L.S.D.		BEGINS
						*	Q
TEST WEIGHT		61.29		61.76	1.18	60.11	58.92
FLOUR YIELD		71.35		70.05	0.77	70.59	69.82
SOFTNESS EQUIV.		61.54		56.45	3.31	58.23	54.92
FLOUR PROTEIN		8.29		8.63	0.67	8.97	9.64
SUCROSE SRC		88.71		96.21			
LACTIC ACID RETENTION		109.47		105.17			
COOKIE DIAMETER		18.88		18.54	0.25	18.62	18.37

		A	B	C	D	E	F	TOTAL
MILLING SCORE		0	0	15	22	5	0	
BAKING SCORE		0	0	5	8	13	16	42
SOFTNESS EQUIV. SCORE		0	5	19	11	5	2	

ADVANCED NURSERY EVALUATION
FOR SOFT WHEAT MILLING AND BAKING QUALITY
2009 Crop

Clay Sneller - Ohio State University

Wooster, OH

UEWWN

ENTRY	MILLING QUALITY SCORE	BAKING QUALITY SCORE	SOFT. EQUIV. SCORE	TEST WT. LB/BU	ADJ. YIELD %	SOFT. EQUIV. %	FLOUR PROT. %	LACTIC ACID SRC	SUCROSE SRC %	COOKIE DIAM. CM.	TOP GR.
Nusery Average	57.81	43.68	60.04	61.76	70.05	56.45	8.63	105.17	96.21	18.54	5.69
Allis Database - Branson	64.36	55.00	74.57	60.20	76.39		8.24	95.70		17.45	
Branson	64.36	55.00	74.57	61.29	71.35	61.54	8.29	109.47	88.71	18.88	7.00
Branson - Average	67.08	67.94	80.99	60.78	71.11	63.24	8.27	112.08	89.51	18.57	5.47
Branonn - Standard Deviation	6.24	13.16	4.50	2.15	0.78	2.57	0.55	9.10	7.14	0.63	1.22
Roane	51.80	30.48	63.92	63.75	68.85	57.81	8.53	113.82	97.84	18.14	6.00
Roane - Average	59.82	40.32	72.54	63.75	69.09	59.43	8.64	116.23	99.06	17.51	3.26
Roane - Standard Deviation	6.14	14.51	5.65	2.74	1.27	2.36	0.67	9.89	6.41	0.57	1.33
INW 0411	59.88	39.74	57.58	60.61	70.46	55.59	8.91	95.24	97.69	18.42	6.00
INW 0411 - Average	66.78	48.93	64.87	59.80	69.63	56.74	8.91	100.84	92.33	17.72	4.00
INW 0411 - Standard Deviation	6.36	15.96	8.30	2.67	1.19	3.25	0.90	6.92	4.13	0.42	1.20

Conditional formatting set:

Blue = values less than two standard deviations from the mean of the database average

Black = values greater than two standard deviations from the mean of the database average