2011 Hard Winter Wheat Regional Performance Nursery Quality Report

Hard Winter Wheat Quality Laboratory

Dr. Richard Y. Chen and Dr. Bradford W. Seabourn

USDA-ARS-CGAHR
1515 College Avenue
Manhattan, KS

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Locations from the **NRPN**, and **SRPN** were subdivided into **intraregional production zones**. The intraregional production zones represent broad production regions in which several locations have been composited by similar historical yield trends. Full quality testing is performed on these samples, and the data are listed beginning with the name of the nursery followed by a zone identifier (eg. "NRPN-NCP breadmaking properties," the NCP indicating North Central Plains Zone).

The **NRPN**, and **SRPN** regional nursery locations were subdivided and variety-composited according to the following zones:

Northern Regional Performance Nursery (NRPN)

North Central Plains (NCP)
Dakota Lakes/(Pierre), SD
Brookings, SD
Winner, SD
North Platte, NE
Crookston, MN
St Paul, MN

Northern Plains (NP)
Prosper, ND
Williston, ND
Bozeman, MT
Moccasin, MT

Northern High Plains (NHP)
Alliance, NE

Southern Regional Performance Nursery (SRPN)

North Central Plains (NCP)
Manhattan, KS
Clay Center, NE
Brookings, SD
Dakota Lakes/(Pierre), SD
Winner, SD

Northern High Plains (NHP)
North Platte, NE
Alliance, NE
Akron, CO
Burlington, CO
Ft. Collins, CO
Julesburg, CO
Farmington, NM

South Central Plains (SCP)

Bushland-irr, TX
Goodwell-irr, OK
Hays, KS
Hutchison, KS
Lahoma, OK
Granite, OK
Dallas/Prosper, TX
Stillwater, OK

Southern High Plains (SHP)

Bushland-dry, TX
Clovis-dry, NM
Clovis-irr, NM
Walsh, CO

HWWQL Laboratory Analyses

About the HWWQL Quality Data ...

Milling, flour chemical, physical dough, breadmaking, noodlemaking properties and flour protein analysis of 2011 Hard Winter Wheat regional performance nurseries have been evaluated and analyzed in the USDA Hard Winter Wheat Quality Laboratory. The nurseries are: **Northern Regional Performance Nursery (NRPN)**, and **Southern Regional Performance Nursery (SRPN).** Tested samples were composites from multi-location trials. Data are reported in five tables: Wheat physical data, Milling, flour chemical, and noodle color data, Mixograph data, Flour pasting properties, and Breadmaking properties.

The following parameters are currently reported:

Physical and Hardness Data

- Test weight (TW) = lbs/bushel. (AACC Method 55-10)
- SKCS kernel moisture, size, and weight = Single Kernel Characterization System: the average of 300 kernels for kernel moisture (%), size (mm), and weight (mg) and their standard deviations.
- SKCS hardness (AACC Method 55-31) = hardness score: the average of 300 kernels for kernel hardness and its standard deviation.

Chemical Data

NIR Protein Content
NIR calibrations for protein were developed according to standard AACC methods: wheat meal (AACC Method 39-10), wheat flour (AACC Method 39-11) and whole kernel wheat (AACC Method 39-25). Laboratory values for protein content and subsequent equation development and calibration checks were determined by nitrogen combustion method (AACC Method 46-30) in all three sample types.

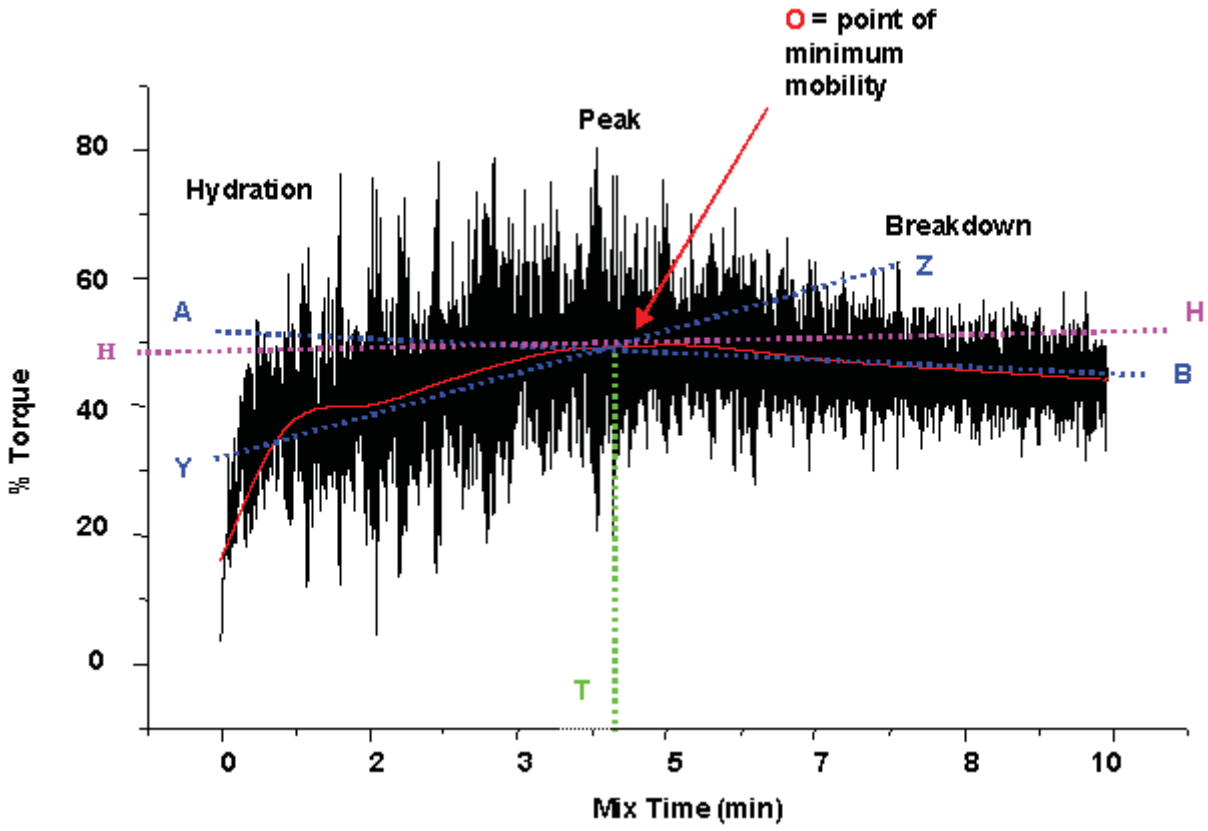
Wheat
- Protein (FP) = grain protein content (%) on 14% mb. (AACC Method 46-30 or 39-10)
- Flour % (FY) = flour yield (extraction) from milling (AACC Methods 26-10A, -50)

Flour
- Ash (FA) = flour ash content (%) on 14% mb. (AACC Method 08-01)
- Protein (FP) = flour protein content (%) on 14% mb. (AACC Method 46-30 or 39-11)
- Color (dry flour) = Minolta method
- PPO = polyphenol oxidase activity defined as a change of 0.001absorbance unit (AU)/min/mL

Mixograph Data

Mixograph (AACC Method 54-40)
- Absorption = optimal water added (% of flour wt. on 14% mb).
- Mix Time = time (as-is), in minutes, to peak dough development.
- Tolerance = resistance of dough to over-mixing (0 = unsatisfactory, 4 = satisfactory, 6 = outstanding).

Mixogram Curve

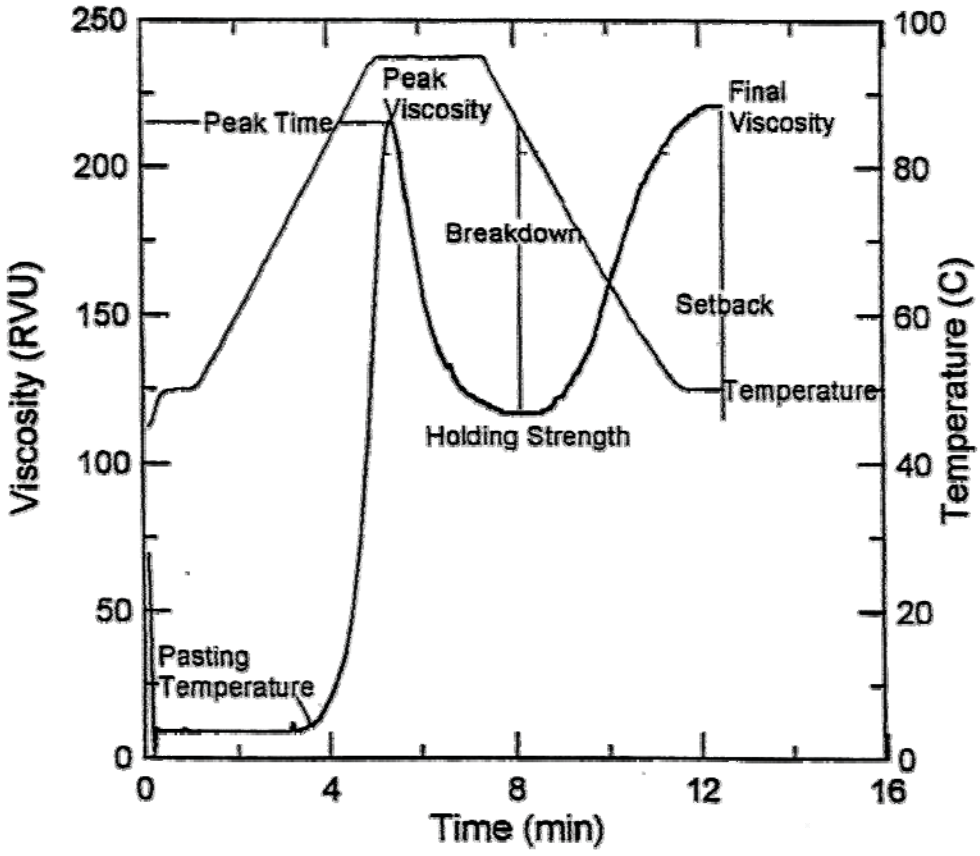


Rapid Visco Analyser (RVA) (AACC Method 61-02)

13 min pasting profile:

- Peak viscosity = maximum viscosity developed during or soon after the heating portion of the test, in RVU.
- Peak time = time at which the peak viscosity occurred, in minutes.
- Pasting temperature = temperature where viscosity first increases by at least 2 RVU over a 20 sec. period, in ^{o}C.
- Peak temperature = temperature at which the peak viscosity occurred, in ^{o}C.
- Holding strength = minimum viscosity after the peak, normally occurring around the commencement of sample cooling, in RVU.
- Breakdown = peak viscosity minus trough viscosity, in RVU.
- Final viscosity = viscosity at the end of the test, in RVU.
- Setback from Peak = final viscosity minus peak viscosity, in RVU.
- Setback from Trough = final viscosity minus trough viscosity, in RVU.

Pasting profile:



Breadmaking Properties *(Pup Loaf based on 100 g flour, AACC Method 10-10B)*
- Flour protein (FP) = flour protein content (14% mb) (AACC Method 46-30 or 39-11).
- Flour absorption = optimal water added (%) for breadmaking.
- Mix time = bake mix time, in min, as-is and corrected.
- Dough weight = dough weight (g) after mixing.
- Proof height = height of fermented dough (cm) after proofing.
- Crumb grain = internal loaf appearance; 0 = unsatisfactory, 4 = satisfactory 6 = outstanding).
- Loaf volume (LV) = cc (by rape seed displacement).

Noodlemaking Properties
- Alkaline noodle color by Minolta colorimeter

ACKNOWLEDGEMENTS

HWWQL personnel who contributed to the collection and analysis of the RPN samples are listed below:

Milling Lab: Laura McLaughlin, B.S.

Bake/Mixograph Lab/SKCS: Margo Caley, B.S.; Theresa Sutton, B.S.; Susan Xiao, M.D.; Guixiang (Lucy) Lu, M.D.; and Alicsa Mayer, M.S.

Analytical Lab: Kevin Fay, B.S.

Data evaluation & Written report: Yuanhong (Richard) Chen, Ph.D. (HWWQL Associate Director)

HWWQL: Brad Seabourn, Ph.D (HWWQL Director)

RPN Relational database: Scott Haley, Ph.D (Colorado State University)

Achieving acceptable end-use (milling and baking) quality is a fundamental objective of wheat breeding programs throughout the U.S. hard winter wheat region. Numerous statistical methods have been developed to measure quality. Several years ago, Dr. Scott Haley (Colorado State University), in conjunction with the USDA-ARS Hard Winter Wheat Quality Laboratory (HWWQL), developed a relational database for summarization and interpretation of regional performance nursery wheat end-use quality data generated annually by the HWWQL (Scott D. Haley, Rod D. May, Bradford W. Seabourn, and Okkyung K. Chung. 1999. *Relational database system for summarization and interpretation of Hard Winter Wheat regional quality data*. Crop Sci. 39:309–315). Until that time, few tools were available to assist in the decision-making process when faced with a large number of parameters from comprehensive milling and baking tests. The database system uses a graphical interface that requires input from the user. The database system provides simultaneous assessment of multiple quality traits on a standardized scale, *user-specified prioritization* of end-use quality traits for numerical and qualitative ratings of genotypes, tabulation of major quality deficiencies of genotypes, and summarization of quality ratings for a genotype across multiple nurseries.

Tables for milling and baking scores of each of Intraregional production zones in this report are direct outputs from the Relational Database program.

The data were provided by the Hard Winter Wheat Quality Laboratory (HWWQL), located at the USDA/ARS, Center for Grain and Animal Health Research (CGAHR) (Former name: Grain Marketing and Production Research Center, GMPRC), Manhattan, Kansas. Some data may not appear in all years.

**AACC methods cited are from the American Association of Cereal Chemists Approved Methods. 2000. The Association: St. Paul, MN.

Regional Performance Nursery data may be viewed and downloaded at:
http://www.ars.usda.gov/Main/docs.htm?docid=14298&page=3

Northern
Regional Performance Nursery

2011 NRPN Intraregional Production Zone

Entry	Selection No.	Pedigree	Source
1	Kharkof	Kharkof	check
2	Overland	Overland	check
3	Wesley	Wesley	check
4	Jerry	Jerry	check
5	T150-1	T81/T201	Trio
6	T179	T81/CO99314	Trio
7	T180	T135/T140	Trio
8	T181	T131W/T113G	Trio
9	NE07531	HBK0630-4-5=(HBA142A/HBZ623A//ALE)/NE98574=(CO850267/RAWHID	UNL
10	NE07627	KS96HW10-3=(KS91HW29// RIO BLANCO/KS91H184)/WAHOO//NE99585	UNL
11	NW07534	KS920709-B-5-2/NW98S061	UNL
12	NE07487	Lakin/OK96717 F3	UNL
13	NE07520	R-148 (G97343) =(919021/B725//K92)/NI00436	UNL
14	NI08708	CO980829 (=Yuma/T-57//CO850034/3/4*Yuma/4/NEWS1)/Wesley	UNL
15	NE06545	KS92-946-B-15-1=(ABI86*3414/JAG//K92)/ALLIANCE	UNL
16	NI07703	R-148 (G97343) =(919021/B725//K92)/NI00436 =(WI89-273-13/NE93427 (=	UNL
17	NE05496	KS95HW62-6 (=KS87H325/RIO BLANCO)/HALLAM	UNL
18	NX04Y2107	NW98S061/99Y1442	ARS-LNK
19	NW07505	Trego/Thunderbolt F3	UNL
20	SD05085-1	SD92107-2/TX96D2845	SDSU
21	Ideal (SD05118-1)	Wesley/NE93613	SDSU
22	SD05W030	SD98W302/NW97S186	SDSU
23	SD06158	Wesley/CDC Falcon	SDSU
24	SD06W160-2	Wendy//CDC Falcon/Wendy	SDSU
25	SD07126	SD92107-2/SD99W042	SDSU
26	SD07165	SD97250/SD99W006//Avalanche	SDSU
27	SD07W053	Wendy/SD00W073//KS01HW54-4	SDSU
28	SD08028	Millennium/SD97060	SDSU
29	SD08080	SD97059-2/G980723	SDSU

Hard Winter Wheat Quality Report

2011 NRPN-NCP

1 - Test weight	10	11 - Flour protein	8
2 - SKCS kernel weight	8	12 - Bake absorption	15
3 - Kernel weight SD	8	13 - Mixograph absorption	5
4 - SKCS kernel diameter	8	14 - Bake mix time	10
5 - Kernel diameter SD	8	15 - Mixograph mix time	5
6 - SKCS hardness	10	16 - Mixograph tolerance	5
7 - Hardness SD	8	17 - Dough weight	
8 - Flour yield	30	18 - Proof height	2
9 - Flour ash	10	19 - Loaf volume	20
10 - Milling score		20 - Volume regression	5
		21 - Crumb grain	25

ID	Milling Score	Rating	%	Baking Score	Rating	%	1RS	Trait Deficiencies
Kharkof	45.6	Very Poor	76.9	50.5	Very Good	96.3		6,
Overland	55.8	Very Good	94.1	28.2	Poor	53.8		9,16,19,
Wesley	52.1	Average	87.9	37.2	Average	71.0		3,15,
Jerry	49.1	Poor	82.9	33.0	Poor	63.0		3,
T150-1	53.3	Good	90.0	36.2	Average	69.1		15,21,
T179	49.4	Poor	83.4	43.3	Good	82.7		2,4,9,16,21,
T180	51.4	Average	86.7	31.8	Poor	60.7		16,21,
T181	57.6	Very Good	97.3	24.3	Very Poor	46.4		9,14,16,21,
NE07531	56.3	Very Good	94.9	39.3	Good	75.1		
NE07627	56.5	Very Good	95.3	25.8	Very Poor	49.3		15,
NW07534	53.6	Good	90.5	33.5	Poor	63.9		15,
NE07487	53.2	Good	89.8	52.4	Very Good	100.0		2,9,
NE07520	52.5	Average	88.6	39.7	Good	75.8		
NI08708	46.9	Very Poor	79.1	31.9	Poor	61.0		5,
NE06545	47.0	Very Poor	79.4	45.4	Very Good	86.7		
NI07703	53.5	Good	90.3	48.7	Very Good	93.0		
NE05496	48.3	Very Poor	81.5	36.5	Average	69.6		5,
NX04Y2107	42.1	Very Poor	71.1	42.8	Good	81.7		8,10,21,
NW07505	46.6	Very Poor	78.7	29.6	Very Poor	56.6		5,14,15,
SD05085-1	59.2	Very Good	100.0	26.6	Very Poor	50.7		18,19,20,
Ideal	52.1	Average	87.9	32.4	Poor	61.8		14,15,
SD05W030	50.7	Poor	85.5	35.6	Average	67.9	1BL	21,
SD06158	52.8	Average	89.1	35.9	Average	68.4		15,16,
SD06W160-2	48.5	Poor	81.8	28.7	Very Poor	54.8		1,2,4,16,21,
SD07126	50.9	Poor	85.9	44.1	Very Good	84.3		16,
SD07165	52.7	Average	89.0	43.5	Good	83.1		14,15,
SD07W053	54.3	Good	91.7	25.6	Very Poor	48.8	1BL	16,21,
SD08028	50.2	Poor	84.7	32.9	Average	62.8		11,12,13,16,17,21,
SD08080	54.6	Good	92.2	42.8	Good	81.7		

Quality scores and ratings are calculated directly from the relative trait weightings (printed at the top of the page) and are applicable only to the nursery selected.

2011 NRPN Intraregional Production Zone

North Central Plains

		SKCS Average Kernel						Hardness			
		Moisture		Weight		Diameter		SKCS		Class	Distribution
LINE	Wt/Bu (lb)	(%)	(sd)	(mg)	(sd)	(mm)	(sd)		(sd)		
Kharkof	58.0	12.1	0.6	30.5	8.5	2.62	0.34	35	21	MIXED	49--24--13--14--03
Overland	58.0	12.4	0.7	30.6	8.8	2.58	0.34	60	17	HARD	02--18--31--49--01
Wesley	56.6	11.9	0.7	32.1	10.1	2.68	0.37	51	18	MIXED	16--25--29--30--03
Jerry	56.4	12.2	0.7	31.5	10.3	2.57	0.36	49	19	MIXED	21--25--24--30--03
T150-1	56.1	12.1	0.6	32.6	8.8	2.72	0.35	68	16	HARD	01--07--22--70--01
T179	56.1	11.9	0.8	25.3	7.3	2.48	0.32	61	17	HARD	03--16--29--52--01
T180	56.8	11.9	0.7	35.4	9.3	2.75	0.35	59	16	HARD	04--20--29--47--01
T181	57.6	12.3	0.6	31.0	9.3	2.64	0.35	66	16	HARD	02--09--24--65--01
NE07531	59.5	11.9	0.7	30.1	8.8	2.64	0.34	63	17	HARD	03--12--26--59--01
NE07627	58.3	11.9	0.7	29.2	8.5	2.57	0.32	56	17	HARD	08--19--32--41--02
NW07534	57.6	11.8	0.8	33.1	9.0	2.72	0.37	62	17	HARD	04--12--32--52--01
NE07487	58.0	12.2	0.6	27.2	8.4	2.55	0.33	63	17	HARD	03--13--29--55--01
NE07520	57.5	12.0	0.7	29.8	8.7	2.63	0.36	58	17	HARD	07--15--33--45--02
NI08708	56.1	12.0	0.6	30.2	9.9	2.59	0.38	52	19	MIXED	15--26--26--33--03
NE06545	56.7	12.6	0.6	29.7	9.7	2.57	0.37	41	18	MIXED	35--30--16--19--03
NI07703	57.5	12.3	0.7	31.9	9.4	2.66	0.36	51	16	MIXED	12--26--31--31--03
NE05496	56.9	12.1	0.7	30.5	9.8	2.63	0.38	56	19	HARD	09--22--27--42--02
NX04Y2107	57.3	11.9	0.7	32.5	9.4	2.73	0.35	60	15	HARD	05--14--27--54--01
NW07505	57.0	11.9	0.8	31.7	9.7	2.65	0.38	63	19	HARD	06--14--21--59--02
SD05085-1	59.3	12.4	0.6	30.6	8.5	2.62	0.33	54	17	MIXED	11--22--31--36--03
Ideal (SD05118-1)	57.9	12.1	0.7	29.1	8.5	2.57	0.32	55	17	HARD	08--23--30--39--02
SD05W030	57.8	11.4	0.8	28.4	8.6	2.54	0.36	59	18	HARD	06--14--32--48--02
SD06158	58.5	11.5	0.6	30.1	8.8	2.58	0.33	53	17	HARD	10--28--27--35--02
SD06W160-2	55.7	11.4	0.7	27.0	8.4	2.46	0.34	56	17	HARD	08--17--32--43--02
SD07126	58.2	11.6	0.6	29.9	9.3	2.63	0.36	62	17	HARD	05--10--27--58--01
SD07165	58.1	11.7	0.7	29.5	8.7	2.61	0.34	58	17	HARD	05--18--34--43--01
SD07W053	58.7	11.6	0.7	27.8	7.9	2.52	0.34	58	17	HARD	07--16--30--47--02
SD08028	57.7	11.2	0.6	32.5	9.5	2.62	0.35	48	18	MIXED	21--28--23--28--03
SD08080	57.5	10.9	0.7	31.2	8.0	2.62	0.34	49	18	MIXED	18--31--26--25--03

2011 NRPN Intraregional Production Zone

North Central Plains

	Wheat		Flour			Noodle Color					
LINE	Protein (%)	Milling Yield (%)	Ash (%)	Protein (%)	PPO	L @ 0	a @ 0	b @ 0	Delta L 24 hrs	Delta a 24 hrs	Delta b 24 hrs
Kharkof	14.6	68.1	0.40	12.7	0.686	81.31	-1.29	22.45	-10.94	0.78	3.59
Overland	12.6	71.7	0.45	10.9	0.683	80.39	-1.21	22.49	-9.20	0.59	3.09
Wesley	13.5	71.0	0.39	12.1	0.874	81.19	-0.92	20.95	-10.23	0.57	3.47
Jerry	13.4	70.7	0.39	11.8	0.723	82.03	-1.39	23.02	-11.22	0.82	4.29
T150-1	13.1	68.6	0.43	11.4	0.699	80.42	-0.58	20.10	-11.40	0.97	4.04
T179	13.4	68.8	0.44	11.7	0.923	80.58	-1.03	21.28	-11.72	0.98	4.47
T180	12.9	67.6	0.41	10.9	0.703	80.36	-0.57	20.57	-11.10	0.78	3.29
T181	13.8	72.3	0.45	12.4	0.944	81.16	-1.11	21.95	-14.47	0.79	5.46
NE07531	13.6	70.4	0.42	12.0	0.760	81.35	-0.74	20.75	-11.30	0.65	4.31
NE07627	11.9	71.0	0.38	10.5	0.678	80.87	-1.17	22.34	-8.64	0.46	3.44
NW07534	12.9	68.9	0.40	10.9	0.843	82.59	-0.85	19.54	-10.78	0.55	5.19
NE07487	12.5	70.2	0.44	10.9	0.279	82.05	-1.42	22.19	-7.96	0.51	4.37
NE07520	12.7	69.1	0.39	11.1	0.741	81.12	-1.17	22.24	-10.21	0.89	2.96
NI08708	12.5	69.0	0.39	10.9	0.821	81.55	-1.00	20.49	-9.63	0.60	3.69
NE06545	12.3	70.0	0.40	10.5	0.663	81.54	-1.22	23.04	-10.11	0.46	4.45
NI07703	12.8	70.4	0.41	11.1	0.682	80.39	-1.08	23.67	-9.35	0.48	2.50
NE05496	13.0	69.1	0.40	11.0	0.658	80.01	-1.33	24.78	-9.34	0.86	1.80
NX04Y2107	12.9	61.2	0.38	11.2	0.761	85.68	-0.89	17.60	-10.88	0.49	5.40
NW07505	12.6	67.0	0.41	10.9	0.699	82.59	-0.73	18.94	-12.29	0.76	5.47
SD05085-1	12.9	72.7	0.40	11.3	0.559	81.76	-1.09	21.47	-11.34	0.43	5.79
Ideal (SD05118-1)	12.5	69.1	0.39	10.8	0.572	82.04	-1.18	21.96	-10.52	0.74	3.74
SD05W030	12.5	69.1	0.41	10.7	0.491	82.63	-1.16	20.77	-10.79	0.30	7.12
SD06158	12.5	69.4	0.39	11.1	0.721	83.68	-0.69	16.79	-12.02	0.27	6.54
SD06W160-2	13.4	68.3	0.37	11.8	0.825	82.58	-1.01	20.65	-12.61	0.49	4.99
SD07126	13.7	68.1	0.41	12.2	0.756	82.25	-0.93	21.14	-12.64	0.55	7.53
SD07165	12.5	69.1	0.40	11.1	0.762	83.46	-1.25	20.77	-11.34	0.50	6.23
SD07W053	13.4	69.3	0.37	11.3	0.802	81.56	-1.25	22.40	-10.24	0.74	3.35
SD08028	12.0	69.2	0.39	9.9	0.699	82.36	-1.45	21.94	-9.98	0.68	4.08
SD08080	13.0	70.5	0.36	11.1	0.839	83.87	-0.32	16.71	-11.15	0.54	5.31

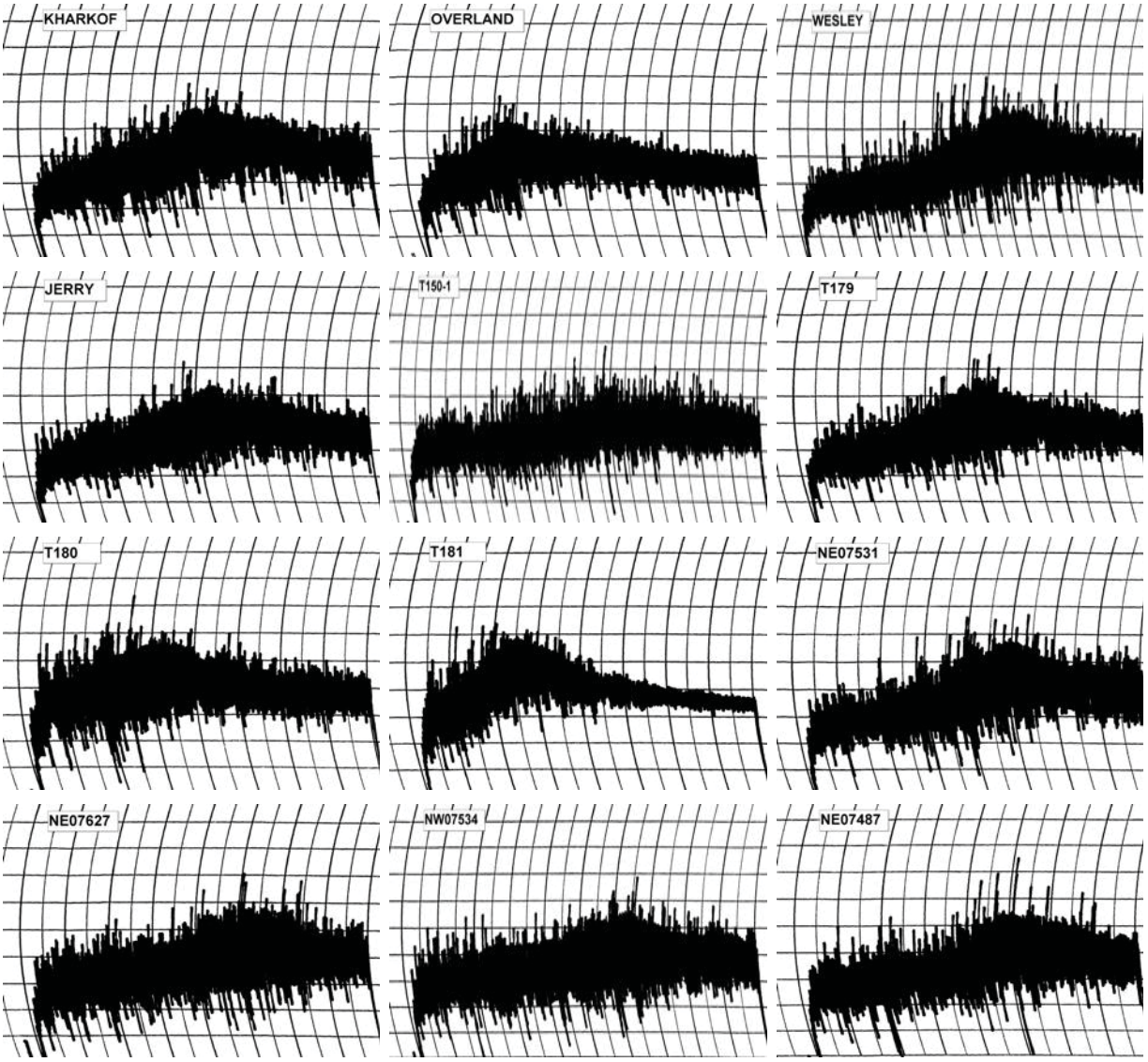
2011 NRPN Intraregional Production Zone

North Central Plains

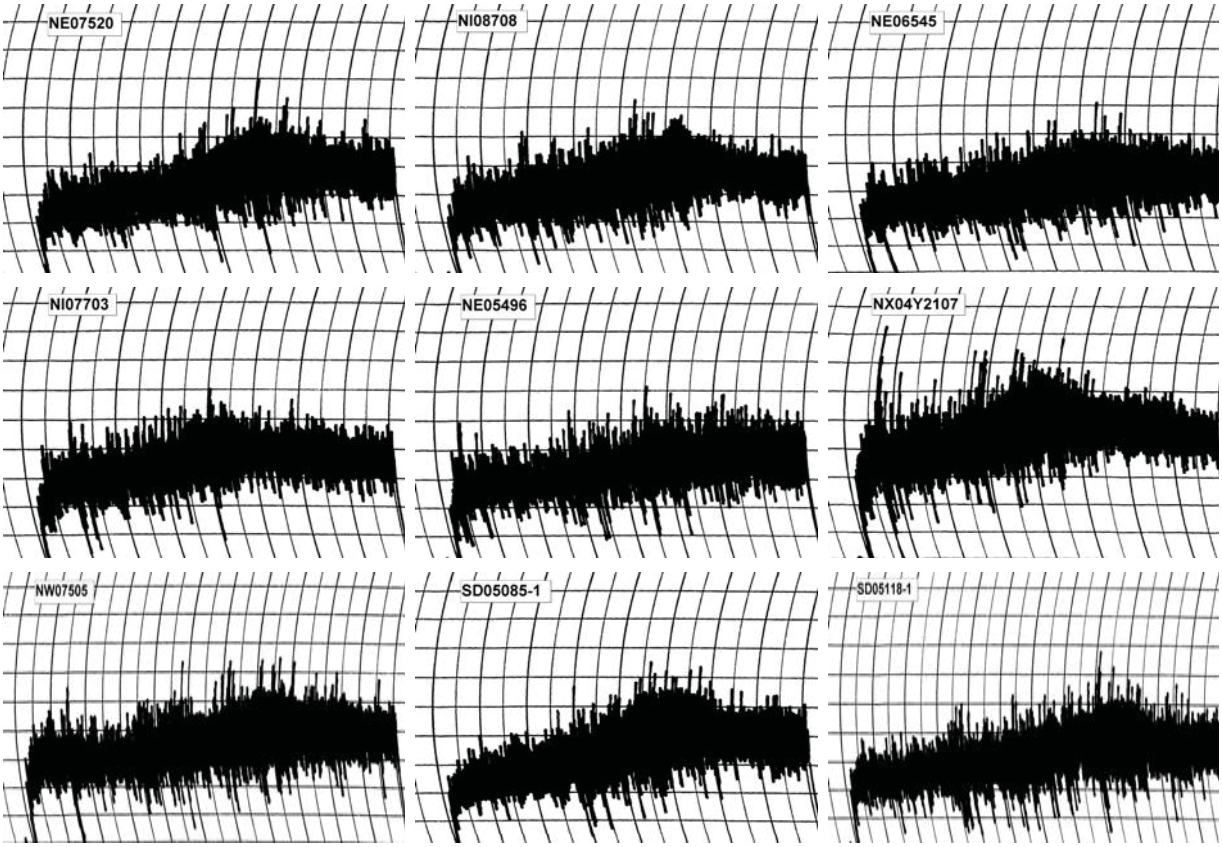
		Mixograph			
	Flour Protein	Absorption	As-Is	Corrected	Tolerance
Line	(%)	(%)	(min)	(min)	
Kharkof	12.7	63.1	4.13	4.13	3
Overland	10.9	61.1	2.38	2.08	2
Wesley	12.1	63.1	6.38	6.38	4
Jerry	11.8	61.7	4.38	4.29	3
T150-1	11.4	61.9	7.38	6.81	3
T179	11.7	61.4	4.50	4.34	2
T180	10.9	61.2	3.38	2.95	2
T181	12.4	63.6	2.50	2.50	0
NE07531	12.0	62.9	5.00	4.99	4
NE07627	10.5	59.5	5.38	4.42	5
NW07534	10.9	61.0	6.50	5.63	4
NE07487	10.9	61.1	5.13	4.45	4
NE07520	11.1	60.5	5.25	4.71	4
NI08708	10.9	61.1	5.25	4.53	3
NE06545	10.5	60.4	5.13	4.18	4
NI07703	11.1	61.5	4.25	3.81	4
NE05496	11.0	60.3	5.13	4.53	5
NX04Y2107	11.2	68.6	4.13	3.72	4
NW07505	10.9	61.6	7.50	6.49	4
SD05085-1	11.3	61.8	5.25	4.82	4
Ideal (SD05118-1)	10.8	60.5	8.75	7.52	4
SD05W030	10.7	60.3	4.13	3.49	3
SD06158	11.1	60.9	5.38	4.79	2
SD06W160-2	11.8	59.6	4.00	3.91	2
SD07126	12.2	59.2	4.25	4.25	2
SD07165	11.1	60.4	6.50	5.79	4
SD07W053	11.3	59.2	3.88	3.54	2
SD08028	9.9	57.0	4.13	3.10	2
SD08080	11.1	60.4	5.25	4.65	4

2011 NRPN Intraregional Production Zone

North Central Plains

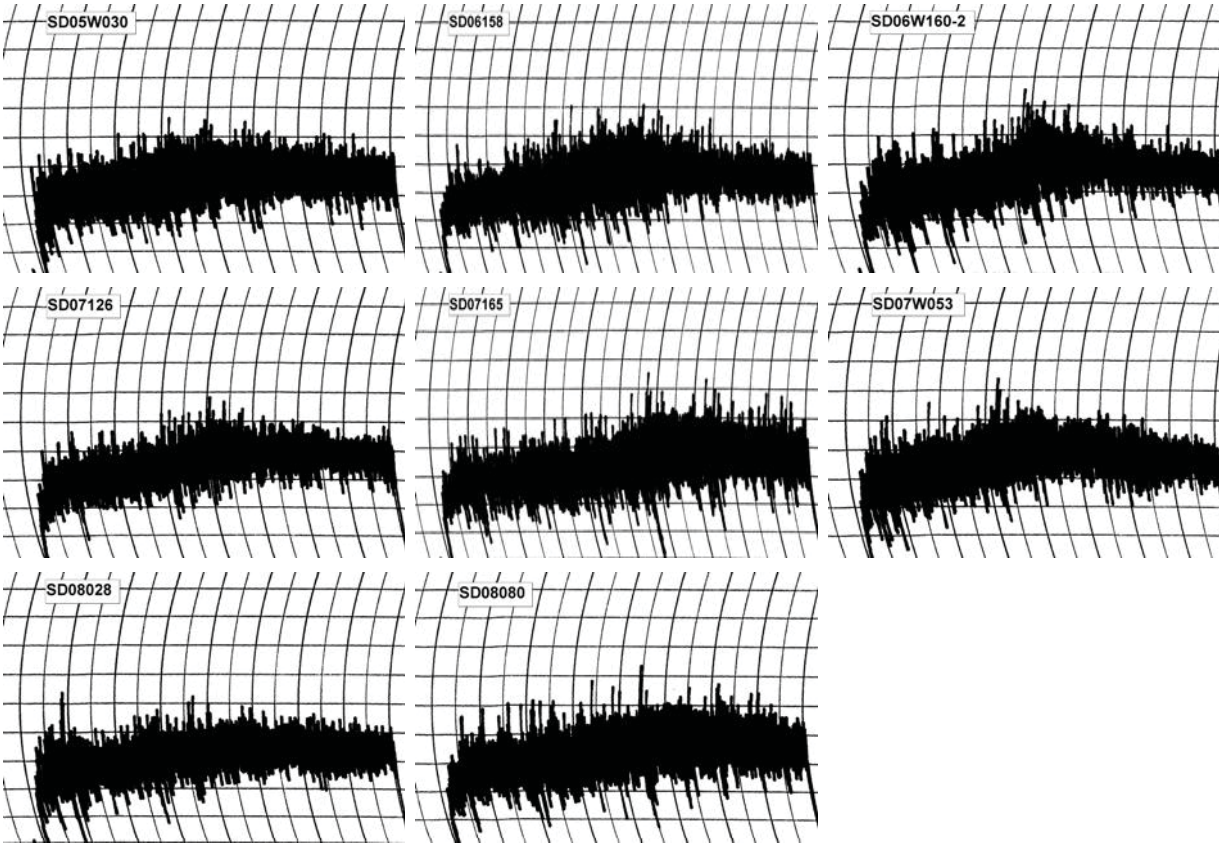


2011 NRPN Intraregional Production Zone
North Central Plains



2011 NRPN Intraregional Production Zone

North Central Plains



2011 NRPN Intraregional Production Zone

North Central Plains

	RVA							
Line	Stirring Number (RVU)	Peak Viscosity (RVU)	Trough Viscosity (RVU)	Breakdown (RVU)	Final Viscosity (RVU)	Set back (RVU)	Peak Time (min)	Pasting Temp (Deg. C)
Kharkof	144.75	233.17	162.25	70.92	270.50	108.25	6.40	86.55
Overland	130.33	212.17	141.75	70.42	256.08	114.33	6.20	67.75
Wesley	126.58	208.25	139.25	69.00	254.08	114.83	6.20	69.45
Jerry	125.92	170.25	102.50	67.75	193.33	90.83	6.00	84.90
T150-1	120.67	241.33	144.00	97.33	252.75	108.75	6.27	67.70
T179	124.25	246.08	158.92	87.17	281.67	122.75	6.33	69.30
T180	117.17	190.67	108.42	82.25	195.00	86.58	6.00	67.80
T181	126.92	187.00	130.42	56.58	243.17	112.75	6.20	86.50
NE07531	100.00	181.75	85.92	95.83	164.58	78.67	5.93	67.80
NE07627	103.83	196.67	120.83	75.83	224.00	103.17	6.07	84.95
NW07534	110.08	164.50	89.58	74.92	178.67	89.08	5.87	83.15
NE07487	110.92	201.25	116.25	85.00	218.83	102.58	6.07	68.60
NE07520	92.50	151.67	62.08	89.58	129.25	67.17	5.73	67.80
NI08708	127.42	207.50	131.17	76.33	241.92	110.75	6.20	86.40
NE06545	118.00	248.17	159.58	88.58	283.83	124.25	6.27	69.35
NI07703	126.17	217.50	140.25	77.25	248.58	108.33	6.20	85.75
NE05496	121.92	268.92	159.25	109.67	264.67	105.42	6.33	69.30
NX04Y2107	51.92	74.67	10.92	63.75	16.58	5.67	3.40	67.80
NW07505	96.83	152.75	67.92	84.83	133.00	65.08	5.87	68.50
SD05085-1	113.00	202.58	132.58	70.00	245.67	113.08	6.13	86.50
Ideal (SD05118-1)	126.75	210.92	136.50	74.42	257.83	121.33	6.13	85.70
SD05W030	126.58	193.92	126.08	67.83	238.25	112.17	6.13	85.00
SD06158	138.25	208.17	148.00	60.17	263.42	115.42	6.27	86.55
SD06W160-2	113.00	161.92	101.50	60.42	196.58	95.08	6.00	84.95
SD07126	137.75	220.00	147.83	72.17	259.25	111.42	6.33	86.55
SD07165	114.58	173.33	81.67	91.67	163.75	82.08	5.87	69.45
SD07W053	106.92	158.92	84.25	74.67	171.08	86.83	5.80	83.25
SD08028	133.25	210.58	138.42	72.17	248.75	110.33	6.13	84.80
SD08080	136.92	214.08	146.83	67.25	261.33	114.50	6.27	86.45

2011 NRPN Intraregional Production Zone

North Central Plains

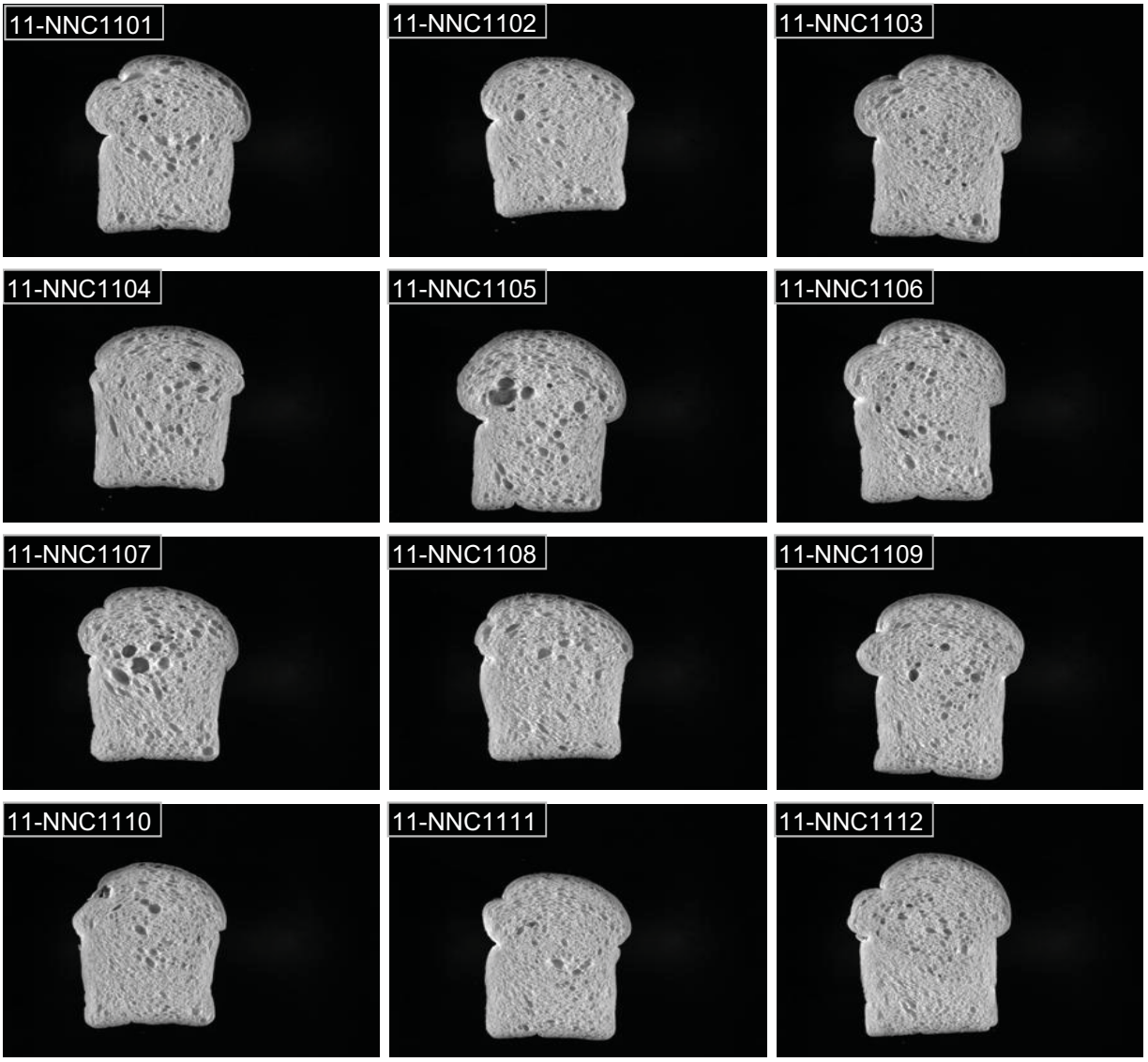
	Flour		Mix Time		Dough					
	Protein	Water Abs.	As-is	Corrected	Weight	Proof Height	Crumb Grain	As-Rec'd.	Specific Volume	Loaf Volume Potential
Line	(%)	(%)	(min)	(min)	(g)	(cm)		(cc)	(cc/g)	(cc/%)
Kharkof	12.7	62.5	4.75	4.75	172.0	6.8	3.0	860	5.7	58
Overland	10.9	58.5	2.88	2.51	168.6	6.5	3.0	730	4.9	54
Wesley	12.1	62.9	6.75	6.75	172.3	7.2	3.5	950	6.4	72
Jerry	11.8	60.8	5.00	4.90	170.9	6.6	3.2	785	5.3	55
T150-1	11.4	61.6	7.00	6.46	170.9	6.7	2.0	910	6.2	73
T179	11.7	60.8	4.50	4.34	170.4	7.1	2.0	915	6.2	71
T180	10.9	61.0	3.50	3.05	171.3	6.6	1.5	855	5.7	69
T181	12.4	61.6	2.50	2.50	171.4	6.9	1.8	790	5.3	52
NE07531	12.0	62.0	5.63	5.62	171.8	7.0	3.2	910	6.1	68
NE07627	10.5	60.1	6.00	4.93	169.3	6.3	2.5	765	5.2	61
NW07534	10.9	61.1	6.75	5.85	170.6	6.6	3.0	770	5.1	59
NE07487	10.9	61.9	5.88	5.10	171.6	7.0	4.0	910	6.1	77
NE07520	11.1	61.6	5.63	5.05	171.3	7.2	3.5	950	6.4	79
NI08708	10.9	62.0	5.50	4.75	171.8	6.5	3.5	825	5.5	66
NE06545	10.5	60.7	5.88	4.80	170.2	6.8	4.0	815	5.5	68
NI07703	11.1	60.7	4.25	3.81	170.2	7.2	3.0	890	5.9	72
NE05496	11.0	60.8	7.00	6.18	169.9	7.3	3.5	955	6.5	81
NX04Y2107	11.2	67.8	4.75	4.28	177.0	7.7	0.0	760	5.0	56
NW07505	10.9	61.1	8.50	7.36	170.1	7.4	3.5	930	6.4	79
SD05085-1	11.3	61.6	5.75	5.28	171.2	6.1	2.5	725	4.8	51
Ideal (SD05118-1)	10.8	61.2	11.00	9.46	169.5	6.9	3.0	820	5.7	66
SD05W030	10.7	62.0	4.50	3.81	171.5	6.6	2.0	750	5.0	58
SD06158	11.1	61.1	5.63	5.01	170.8	7.1	4.2	930	6.3	77
SD06W160-2	11.8	60.1	4.38	4.28	169.5	6.4	1.5	770	5.2	53
SD07126	12.2	60.0	4.38	4.38	169.5	6.9	3.0	870	6.0	62
SD07165	11.1	61.0	7.50	6.68	170.0	6.7	4.0	900	6.1	74
SD07W053	11.3	59.3	3.50	3.19	168.7	6.5	0.5	780	5.2	58
SD08028	9.9	58.1	4.25	3.19	167.7	6.6	2.0	820	5.5	74
SD08080	11.1	60.3	4.63	4.10	169.7	6.7	3.0	840	5.6	67

NRPN Sample ID List

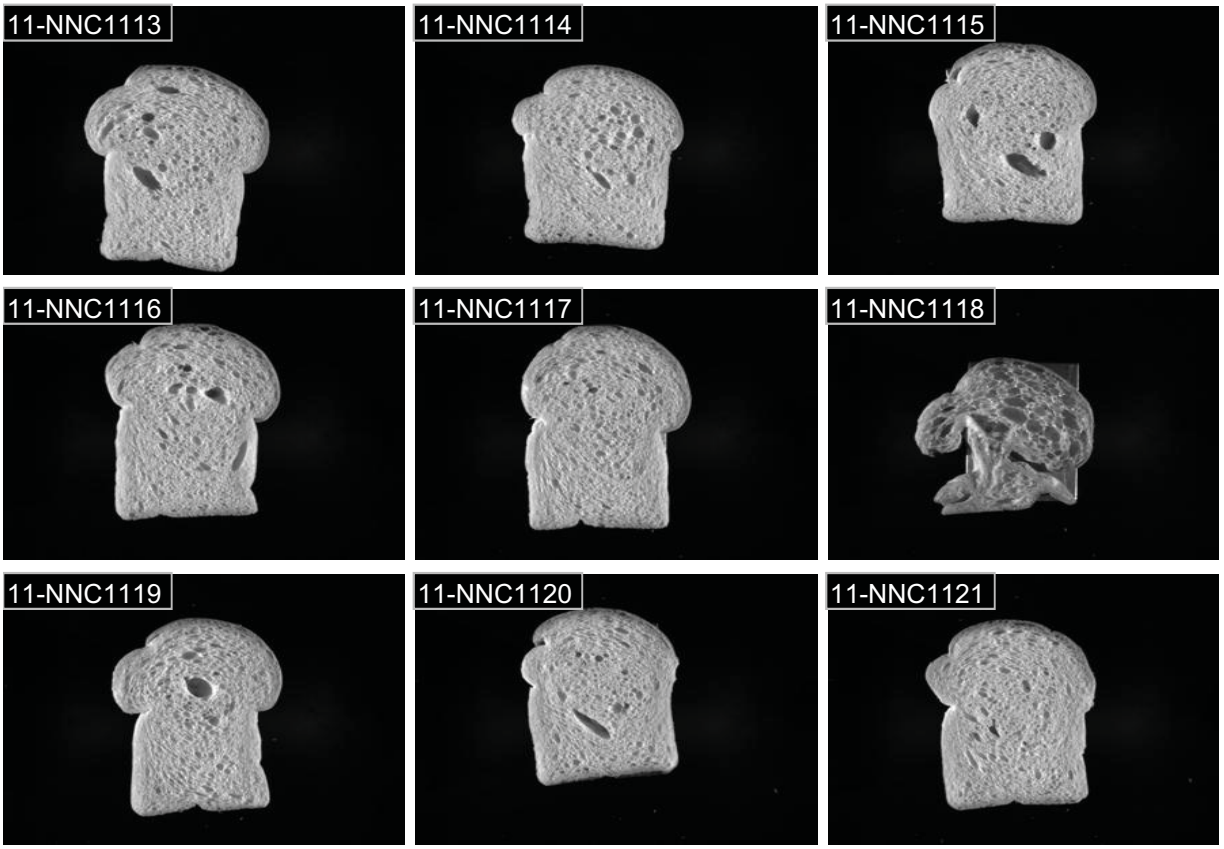
Entry	Breeder ID	HWWQL ID		
		North Central Plains	Northern High Plains	Northern Plains
1	**Kharkof**	11-NNC1101	11-NNH1101	11-NNP1101
2	**Overland**	11-NNC1102	11-NNH1102	11-NNP1102
3	**Wesley**	11-NNC1103	11-NNH1103	11-NNP1103
4	**Jerry**	11-NNC1104	11-NNH1104	11-NNP1104
5	**T150-1**	11-NNC1105	11-NNH1105	11-NNP1105
6	**T179**	11-NNC1106	11-NNH1106	11-NNP1106
7	**T180**	11-NNC1107	11-NNH1107	11-NNP1107
8	**T181**	11-NNC1108	11-NNH1108	11-NNP1108
9	**NE07531**	11-NNC1109	11-NNH1109	11-NNP1109
10	**NE07627**	11-NNC1110	11-NNH1110	11-NNP1110
11	**NW07534**	11-NNC1111	11-NNH1111	11-NNP1111
12	**NE07487**	11-NNC1112	11-NNH1112	11-NNP1112
13	**NE07520**	11-NNC1113	11-NNH1113	11-NNP1113
14	**NI08708**	11-NNC1114	11-NNH1114	11-NNP1114
15	**NE06545**	11-NNC1115	11-NNH1115	11-NNP1115
16	**NI07703**	11-NNC1116	11-NNH1116	11-NNP1116
17	**NE05496**	11-NNC1117	11-NNH1117	11-NNP1117
18	**NX04Y2107**	11-NNC1118	11-NNH1118	11-NNP1118
19	**NW07505**	11-NNC1119	11-NNH1119	11-NNP1119
20	**SD05085-1**	11-NNC1120	11-NNH1120	11-NNP1120
21	**Ideal (SD05118-1)**	11-NNC1121	11-NNH1121	11-NNP1121
22	**SD05W030**	11-NNC1122	11-NNH1122	11-NNP1122
23	**SD06158**	11-NNC1123	11-NNH1123	11-NNP1123
24	**SD06W160-2**	11-NNC1124	11-NNH1124	11-NNP1124
25	**SD07126**	11-NNC1125	11-NNH1125	11-NNP1125
26	**SD07165**	11-NNC1126	11-NNH1126	11-NNP1126
27	**SD07W053**	11-NNC1127	11-NNH1127	11-NNP1127
28	**SD08028**	11-NNC1128	11-NNH1128	11-NNP1128
29	**SD08080**	11-NNC1129	11-NNH1129	11-NNP1129

2011 NRPN Intraregional Production Zone

North Central Plains



2011 NRPN Intraregional Production Zone
North Central Plains



2011 NRPN Intraregional Production Zone
North Central Plains

Hard Winter Wheat Quality Report

2011 NRPN-NHP

1 - Test weight	10	11 - Flour protein	8
2 - SKCS kernel weight	8	12 - Bake absorption	15
3 - Kernel weight SD	8	13 - Mixograph absorption	5
4 - SKCS kernel diameter	8	14 - Bake mix time	10
5 - Kernel diameter SD	8	15 - Mixograph mix time	5
6 - SKCS hardness	10	16 - Mixograph tolerance	5
7 - Hardness SD	8	17 - Dough weight	
8 - Flour yield	30	18 - Proof height	2
9 - Flour ash	10	19 - Loaf volume	20
10 - Milling score		20 - Volume regression	5
		21 - Crumb grain	25

ID	Milling Score	Rating	%	Baking Score	Rating	%	1RS	Trait Deficiencies
Kharkof	52.6	Very Poor	82.6	29.5	Good	60.1		16,
Overland	59.3	Good	93.1	19.1	Poor	39.0		16,21,
Wesley	58.6	Good	92.0	39.8	Very Good	81.1		
Jerry	51.5	Very Poor	80.8	30.4	Good	61.9		3,
T150-1	53.2	Poor	83.5	18.6	Poor	38.0		1,9,14,15,21,
T179	52.6	Very Poor	82.5	49.0	Very Good	100.0		2,4,
T180	53.1	Very Poor	83.4	28.8	Good	58.8		16,21,
T181	60.9	Good	95.7	15.5	Very Poor	31.6		9,16,21,
NE07531	63.3	Very Good	99.4	26.8	Average	54.6		16,
NE07627	58.7	Good	92.2	32.8	Good	66.9		
NW07534	55.1	Poor	86.6	17.8	Very Poor	36.2		5,15,
NE07487	54.4	Poor	85.5	17.4	Very Poor	35.6		2,16,18,
NE07520	58.1	Average	91.2	23.8	Average	48.4		16,21,
NI08708	53.2	Poor	83.6	29.5	Good	60.1		5,16,
NE06545	52.6	Very Poor	82.6	17.3	Very Poor	35.3		5,6,11,12,13,17,18,19,21,
NI07703	57.0	Average	89.5	17.7	Poor	36.0		16,
NE05496	57.6	Average	90.5	31.9	Good	65.0		16,
NX04Y2107	43.6	Very Poor	68.5	39.3	Very Good	80.1		8,10,21,
NW07505	54.2	Poor	85.1	9.7	Very Poor	19.7		14,15,
SD05085-1	63.7	Very Good	100.0	25.4	Average	51.9		
Ideal	61.6	Very Good	96.8	15.8	Very Poor	32.2		
SD05W030	61.0	Good	95.8	21.9	Average	44.7	1BL	16,21,
SD06158	61.1	Good	96.0	25.0	Average	50.9		16,21,
SD06W160-2	58.5	Average	91.8	21.3	Poor	43.4		4,16,
SD07126	58.6	Average	92.0	23.7	Average	48.4		9,16,21,
SD07165	57.5	Average	90.2	34.8	Very Good	71.0		
SD07W053	62.9	Very Good	98.7	18.5	Poor	37.8	1BL	16,
SD08028	56.3	Poor	88.4	19.9	Poor	40.6		13,16,21,
SD08080	61.4	Very Good	96.4	32.9	Very Good	67.2		16,

Quality scores and ratings are calculated directly from the relative trait weightings (printed at the top of the page) and are applicable only to the nursery selected.

2011 NRPN Intraregional Production Zone

Northern High Plains

		SKCS Average Kernel						Hardness			
		Moisture		Weight		Diameter		SKCS		Class	Distribution
LINE	Wt/Bu (lb)	(%)	(sd)	(mg)	(sd)	(mm)	(sd)		(sd)		
Kharkof	60.9	11.4	0.3	26.6	6.5	2.45	0.26	47	18	MIXED	22--29--25--24--03
Overland	59.1	11.4	0.3	30.7	6.8	2.60	0.28	50	16	MIXED	12--29--32--27--03
Wesley	58.5	10.7	0.3	30.3	6.9	2.64	0.29	50	15	MIXED	12--29--32--27--03
Jerry	58.3	11.3	0.3	29.1	8.5	2.49	0.31	56	18	HARD	10--19--28--43--02
T150-1	57.0	10.9	0.3	28.3	7.3	2.55	0.28	67	15	HARD	03--07--17--73--01
T179	58.0	10.6	0.4	22.5	5.8	2.33	0.27	75	17	HARD	01--03--10--86--01
T180	59.6	10.4	0.3	33.3	7.9	2.65	0.30	60	16	HARD	02--16--32--50--01
T181	59.8	11.2	0.3	29.1	7.4	2.52	0.28	67	16	HARD	03--07--21--69--01
NE07531	62.3	11.0	0.3	31.8	7.5	2.65	0.28	65	16	HARD	02--08--22--68--01
NE07627	60.3	11.2	0.3	29.9	7.3	2.57	0.30	60	19	HARD	09--15--22--54--02
NW07534	58.5	11.0	0.3	31.3	7.8	2.67	0.34	66	18	HARD	04--07--24--65--01
NE07487	59.7	11.3	0.3	25.5	6.6	2.46	0.30	61	19	HARD	07--13--27--53--02
NE07520	59.3	11.1	0.3	29.7	6.6	2.62	0.30	54	17	MIXED	11--21--32--36--03
NI08708	58.6	10.9	0.3	30.7	7.9	2.60	0.33	48	18	MIXED	18--32--24--26--03
NE06545	59.1	11.2	0.3	32.1	7.8	2.68	0.35	33	17	SOFT	53--25--14--08--04
NI07703	59.3	11.2	0.4	30.4	7.6	2.60	0.31	51	18	MIXED	14--27--26--33--03
NE05496	60.0	11.2	0.4	31.0	7.2	2.65	0.29	56	18	HARD	06--24--25--45--02
NX04Y2107	59.7	10.9	0.3	32.6	7.6	2.73	0.28	61	14	HARD	01--14--29--56--01
NW07505	60.0	10.6	0.4	30.4	6.6	2.63	0.28	68	17	HARD	03--08--18--71--01
SD05085-1	60.8	11.2	0.3	29.7	6.4	2.59	0.29	59	17	HARD	07--15--27--51--02
Ideal (SD05118-1)	60.7	10.9	0.3	29.6	6.2	2.59	0.27	63	16	HARD	04--12--24--60--01
SD05W030	61.1	11.1	0.3	31.0	6.6	2.63	0.30	70	14	HARD	01--05--14--80--01
SD06158	60.5	10.8	0.3	30.5	6.5	2.58	0.26	55	14	HARD	08--17--36--39--02
SD06W160-2	58.1	11.4	0.3	26.7	6.4	2.40	0.27	62	14	HARD	02--11--29--58--01
SD07126	60.7	11.4	0.3	30.5	7.9	2.64	0.30	69	16	HARD	01--06--19--74--01
SD07165	59.7	11.1	0.3	28.4	6.9	2.58	0.30	57	16	HARD	07--18--32--43--02
SD07W053	61.1	10.6	0.4	27.1	5.8	2.50	0.25	69	14	HARD	01--05--21--73--01
SD08028	60.0	11.3	0.3	32.2	6.7	2.60	0.30	53	18	MIXED	13--22--30--35--03
SD08080	59.1	10.8	0.3	30.2	6.0	2.62	0.27	50	15	MIXED	11--32--31--26--03

2011 NRPN Intraregional Production Zone

Northern High Plains

	Wheat		Flour			Noodle Color					
LINE	Protein (%)	Milling Yield (%)	Ash (%)	Protein (%)	PPO	L @ 0	a @ 0	b @ 0	Delta L 24 hrs	Delta a 24 hrs	Delta b 24 hrs
Kharkof	11.7	68.0	0.40	10.3	0.470	83.50	-1.41	20.65	-8.42	0.32	4.86
Overland	9.6	70.8	0.40	8.2	0.461	83.36	-1.62	21.05	-8.64	0.72	3.43
Wesley	10.4	70.3	0.38	9.1	0.511	83.32	-1.60	21.01	-8.37	0.56	4.04
Jerry	11.2	69.7	0.43	9.6	0.553	82.51	-1.62	24.55	-9.21	0.79	3.72
T150-1	10.9	68.1	0.45	9.8	0.495	82.62	-1.15	21.06	-10.88	0.58	2.70
T179	12.7	67.4	0.43	11.2	0.709	82.59	-1.61	24.15	-9.38	0.90	2.68
T180	11.4	65.9	0.41	9.9	0.507	81.67	-1.17	21.66	-11.72	1.01	2.90
T181	10.6	71.5	0.44	9.5	0.699	82.27	-1.95	25.99	-11.17	0.82	2.79
NE07531	10.8	70.5	0.43	9.4	0.523	84.44	-1.57	20.76	-11.45	0.66	4.80
NE07627	10.1	70.8	0.39	8.5	0.493	83.00	-1.77	23.08	-9.22	0.95	3.06
NW07534	10.9	68.6	0.40	9.2	0.604	84.98	-1.49	20.74	-10.04	0.57	5.87
NE07487	9.5	69.5	0.41	8.2	0.212	84.53	-2.06	22.59	-7.19	0.15	5.35
NE07520	9.6	70.0	0.37	8.1	0.443	84.41	-1.83	21.22	-10.09	0.83	5.46
NI08708	9.4	69.4	0.37	8.1	0.524	83.66	-2.08	22.26	-7.97	1.19	2.11
NE06545	9.0	68.5	0.35	7.6	0.446	84.28	-2.33	23.80	-8.24	0.80	3.82
NI07703	9.4	70.4	0.37	8.5	0.432	83.04	-1.97	23.90	-8.28	0.87	2.59
NE05496	9.7	69.5	0.38	8.0	0.590	83.63	-2.16	24.47	-9.20	0.95	2.64
NX04Y2107	10.4	58.4	0.39	8.5	0.658	88.31	-1.63	18.01	-7.91	0.36	3.41
NW07505	9.3	65.7	0.40	7.8	0.526	85.80	-1.82	19.91	-10.46	0.89	4.02
SD05085-1	10.4	71.5	0.36	8.7	0.484	74.10	-2.13	22.34	1.60	0.81	2.82
Ideal (SD05118-1)	9.7	69.2	0.37	8.2	0.550	84.36	-2.07	22.24	-9.28	1.08	2.63
SD05W030	10.2	68.0	0.41	8.6	0.314	85.13	-2.13	22.97	-8.81	0.27	5.27
SD06158	10.1	69.3	0.37	8.9	0.497	84.08	-1.81	19.93	-8.37	0.82	3.13
SD06W160-2	10.8	69.8	0.37	9.4	0.552	83.61	-1.96	23.90	-11.12	1.04	2.26
SD07126	11.3	69.0	0.44	9.9	0.527	81.79	-2.18	26.01	-10.25	1.26	2.70
SD07165	9.8	69.3	0.38	8.7	0.512	84.57	-2.01	21.83	-9.53	0.47	4.69
SD07W053	11.7	69.2	0.38	9.9	0.627	82.28	-2.22	25.20	-10.65	1.18	1.63
SD08028	9.7	68.8	0.39	8.0	0.494	84.28	-1.95	21.97	-10.37	0.75	4.49
SD08080	10.7	70.7	0.37	9.2	0.563	84.06	-1.34	19.07	-8.87	0.95	2.86

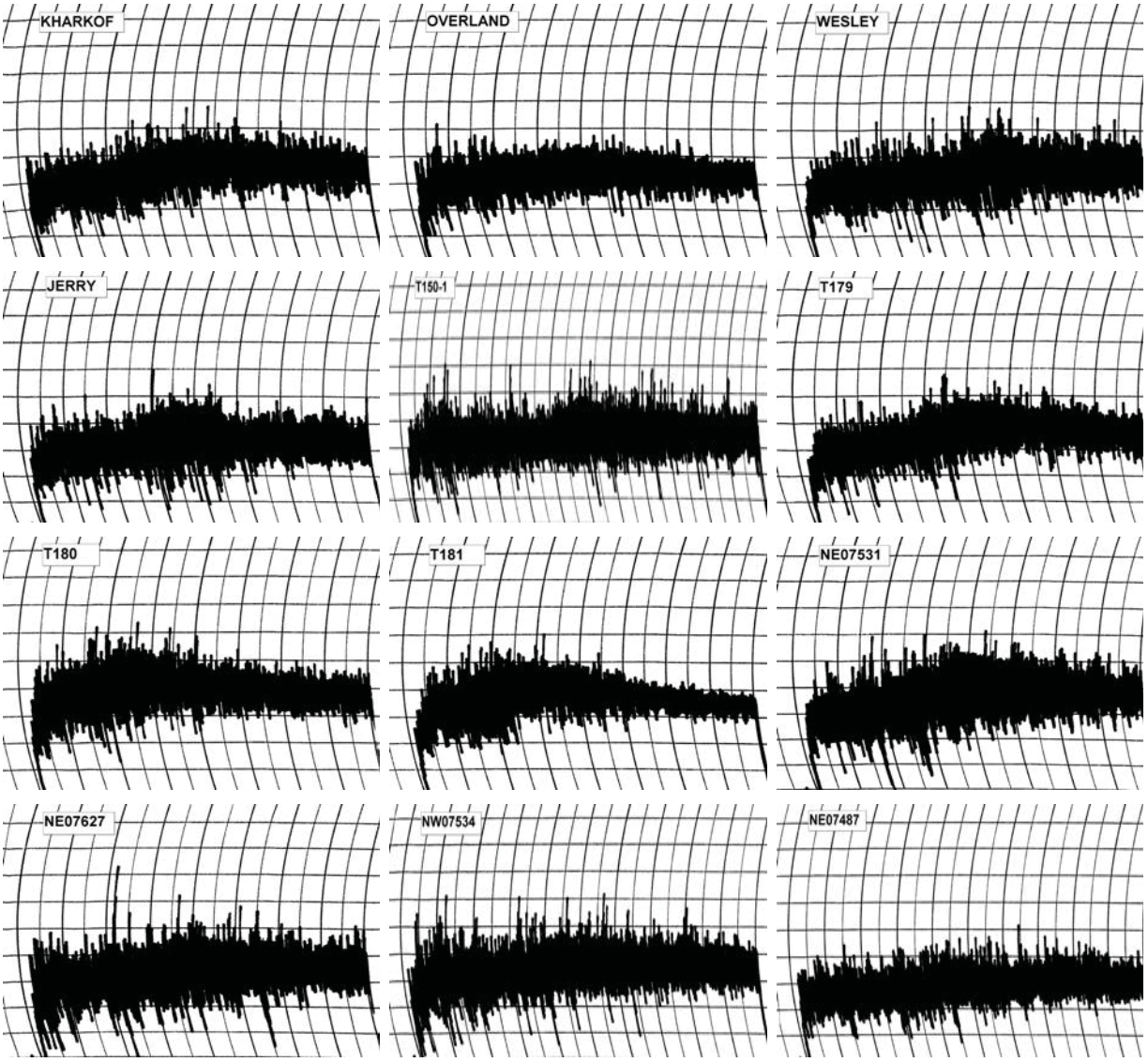
2011 NRPN Intraregional Production Zone

Northern High Plains

		Mixograph			
	Flour Protein	Absorption	As-Is	Corrected	Tolerance
Line	(%)	(%)	(min)	(min)	
Kharkof	10.3	59.0	4.00	3.16	2
Overland	8.2	54.6	3.63	1.98	1
Wesley	9.1	57.2	4.63	3.04	4
Jerry	9.6	58.0	3.88	2.77	3
T150-1	9.8	58.2	7.13	5.24	4
T179	11.2	59.6	4.38	3.96	3
T180	9.9	58.4	2.50	1.87	2
T181	9.5	57.8	2.25	1.58	1
NE07531	9.4	58.6	3.75	2.59	2
NE07627	8.5	56.1	4.38	2.55	4
NW07534	9.2	57.8	5.38	3.57	4
NE07487	8.2	55.6	4.88	2.63	2
NE07520	8.1	56.0	3.38	1.80	2
NI08708	8.1	54.9	4.13	2.19	2
NE06545	7.6	53.6	4.25	2.01	3
NI07703	8.5	55.5	3.50	2.01	2
NE05496	8.0	55.9	4.38	2.30	2
NX04Y2107	8.5	62.2	3.63	2.12	3
NW07505	7.8	56.0	5.63	2.81	4
SD05085-1	8.7	57.3	3.50	2.10	3
Ideal (SD05118-1)	8.2	56.6	5.00	2.74	4
SD05W030	8.6	57.3	3.38	2.01	2
SD06158	8.9	57.7	4.38	2.73	2
SD06W160-2	9.4	56.2	3.50	2.43	1
SD07126	9.9	55.4	3.00	2.24	1
SD07165	8.7	56.4	4.38	2.62	4
SD07W053	9.9	55.9	3.38	2.52	1
SD08028	8.0	53.8	2.63	1.36	1
SD08080	9.2	57.2	3.50	2.31	2

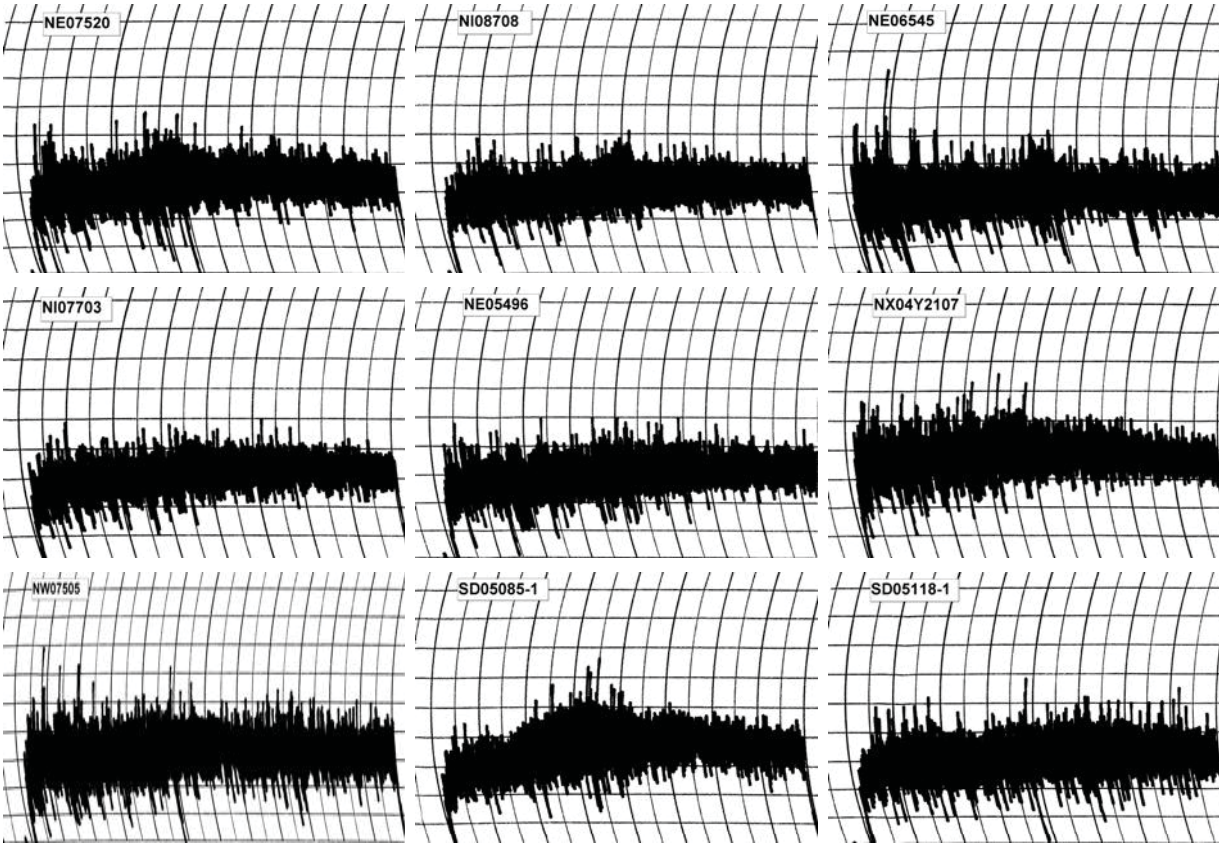
2011 NRPN Intraregional Production Zone

Northern High Plains



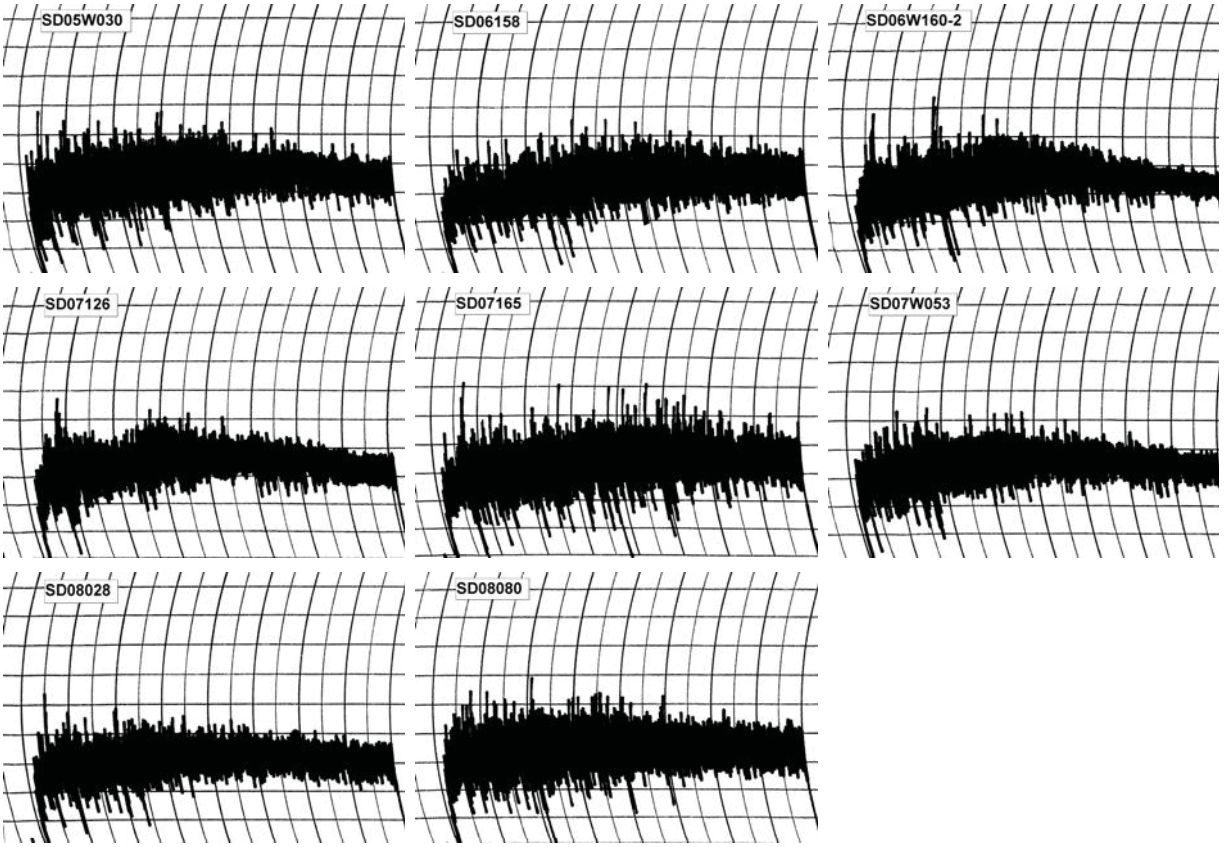
2011 NRPN Intraregional Production Zone

Northern High Plains



2011 NRPN Intraregional Production Zone

Northern High Plains



2011 NRPN Intraregional Production Zone

Northern High Plains

	RVA							
Line	Stirring Number (RVU)	Peak Viscosity (RVU)	Trough Viscosity (RVU)	Breakdown (RVU)	Final Viscosity (RVU)	Set back (RVU)	Peak Time (min)	Pasting Temp (Deg. C)
Kharkof	167.33	241.08	174.33	66.75	295.08	120.75	6.40	86.55
Overland	137.33	235.83	161.42	74.42	279.92	118.50	6.33	86.55
Wesley	139.67	241.92	162.33	79.58	288.67	126.33	6.27	67.85
Jerry	156.92	233.67	170.83	62.83	299.58	128.75	6.33	86.55
T150-1	145.75	284.25	176.75	107.50	295.58	118.83	6.40	67.85
T179	146.50	267.83	179.17	88.67	307.67	128.50	6.40	67.85
T180	152.00	260.58	181.58	79.00	293.00	111.42	6.53	67.85
T181	147.92	206.42	146.83	59.58	274.92	128.08	6.20	86.60
NE07531	130.58	262.75	160.58	102.17	267.08	106.50	6.40	67.65
NE07627	147.00	245.17	169.50	75.67	293.33	123.83	6.33	86.55
NW07534	177.50	252.42	183.58	68.83	308.58	125.00	6.47	86.45
NE07487	116.83	247.25	158.33	88.92	282.17	123.83	6.27	68.55
NE07520	134.33	251.92	168.00	83.92	275.17	107.17	6.47	67.75
NI08708	127.08	251.17	167.08	84.08	297.50	130.42	6.27	85.65
NE06545	146.67	289.67	197.17	92.50	337.75	140.58	6.40	84.90
NI07703	140.25	249.58	167.33	82.25	291.67	124.33	6.33	86.50
NE05496	117.92	295.25	174.50	120.75	286.33	111.83	6.27	67.80
NX04Y2107	110.17	210.08	83.08	127.00	119.67	36.58	3.73	68.60
NW07505	119.67	282.58	170.92	111.67	289.75	118.83	6.47	67.75
SD05085-1	137.33	236.17	157.92	78.25	283.00	125.08	6.27	86.50
Ideal (SD05118-1)	135.25	238.42	169.50	68.92	308.50	139.00	6.27	86.50
SD05W030	164.67	228.75	171.75	57.00	298.08	126.33	6.40	86.55
SD06158	160.33	229.33	172.58	56.75	299.00	126.42	6.40	87.40
SD06W160-2	154.17	226.17	170.25	55.92	306.75	136.50	6.33	86.45
SD07126	167.25	246.08	179.58	66.50	307.42	127.83	6.47	87.35
SD07165	174.58	286.25	198.67	87.58	319.42	120.75	6.53	86.40
SD07W053	144.08	239.33	170.08	69.25	308.67	138.58	6.33	86.55
SD08028	162.33	255.75	191.75	64.00	319.58	127.83	6.47	86.55
SD08080	170.75	244.50	179.83	64.67	303.58	123.75	6.47	87.35

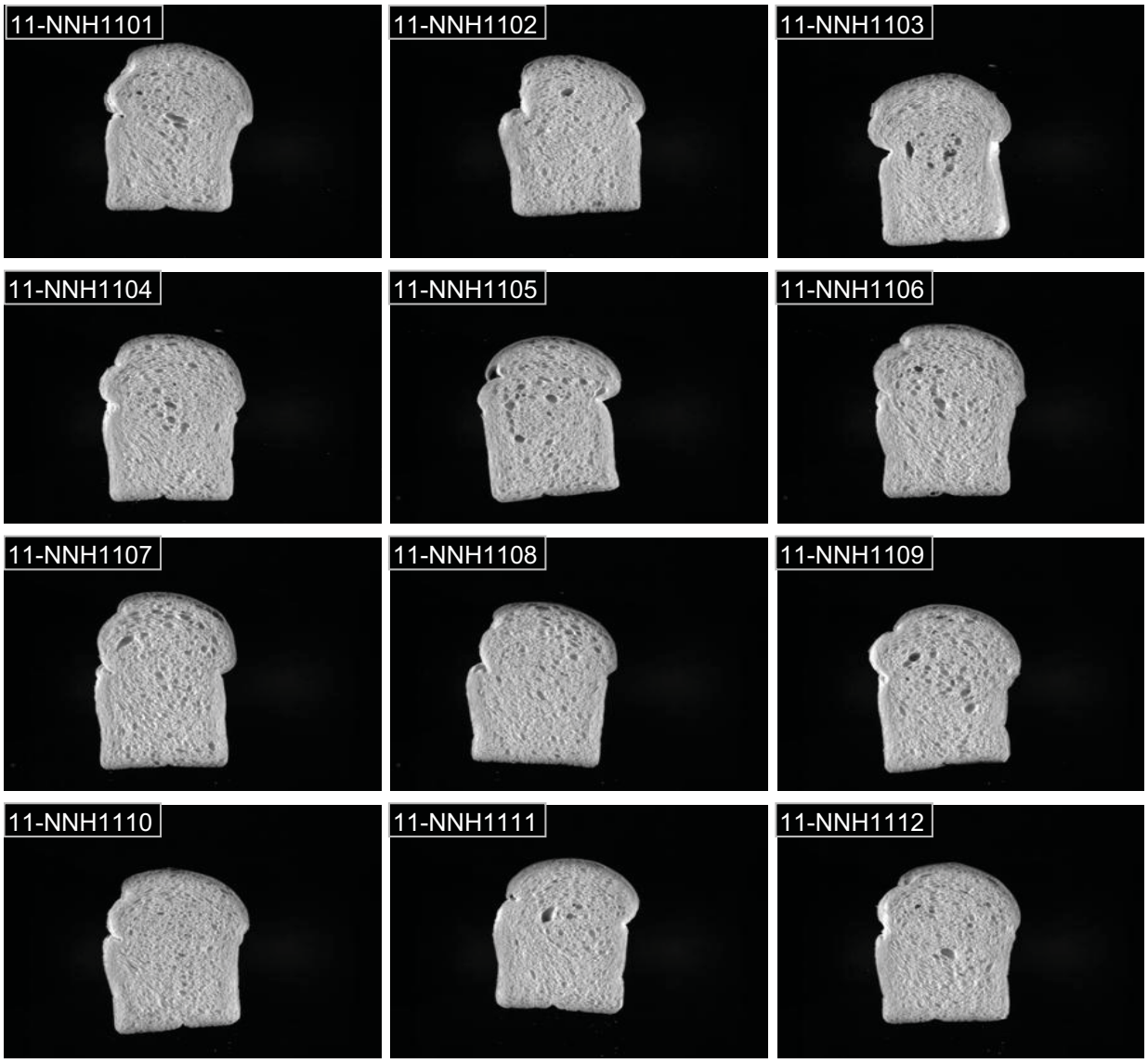
2011 NRPN Intraregional Production Zone

Northern High Plains

	Flour		Mix Time		Dough					
	Protein	Water Abs.	As-is	Corrected	Weight	Proof Height	Crumb Grain	As-Rec'd.	Specific Volume	Loaf Volume Potential
Line	(%)	(%)	(min)	(min)	(g)	(cm)		(cc)	(cc/g)	(cc/%)
Kharkof	10.3	58.6	5.00	3.95	167.6	7.1	3.5	775	5.2	64
Overland	8.2	55.8	3.63	1.98	165.7	6.5	1.0	700	4.8	72
Wesley	9.1	57.3	5.50	3.61	167.0	7.0	4.0	760	5.2	72
Jerry	9.6	57.9	5.13	3.66	167.3	7.0	3.5	800	5.5	74
T150-1	9.8	58.5	8.75	6.43	167.0	6.6	1.0	775	5.2	68
T179	11.2	60.7	4.25	3.84	169.8	7.0	4.0	855	5.8	67
T180	9.9	58.3	3.13	2.34	167.8	7.1	2.0	835	5.7	76
T181	9.5	56.8	2.75	1.93	166.6	6.7	1.5	760	5.2	69
NE07531	9.4	58.6	4.75	3.28	168.0	6.4	2.5	750	5.1	68
NE07627	8.5	57.1	5.50	3.20	166.1	6.5	3.0	725	5.0	73
NW07534	9.2	58.2	6.25	4.14	167.5	6.7	2.5	700	4.8	62
NE07487	8.2	56.0	5.63	3.04	165.5	6.2	2.5	715	4.9	75
NE07520	8.1	56.0	4.75	2.53	165.2	7.0	1.5	750	5.2	82
NI08708	8.1	56.4	4.00	2.12	165.8	6.5	3.0	725	4.9	77
NE06545	7.6	54.2	5.25	2.48	163.3	6.2	1.5	650	4.5	69
NI07703	8.5	56.2	3.75	2.15	165.8	6.7	2.5	705	4.8	70
NE05496	8.0	57.2	6.00	3.15	166.7	6.5	3.0	765	5.2	85
NX04Y2107	8.5	62.9	4.50	2.63	172.8	7.1	0.0	860	5.8	95
NW07505	7.8	56.6	8.00	3.99	165.2	6.5	2.5	700	4.8	76
SD05085-1	8.7	57.3	4.50	2.70	167.3	6.7	3.8	760	5.1	77
Ideal (SD05118-1)	8.2	57.3	6.75	3.70	166.3	6.5	2.5	700	4.8	71
SD05W030	8.6	57.2	3.88	2.31	167.5	6.4	2.0	680	4.6	64
SD06158	8.9	57.4	4.38	2.73	167.2	6.6	2.0	705	4.8	66
SD06W160-2	9.4	57.1	3.50	2.43	167.3	6.7	2.5	770	5.2	71
SD07126	9.9	57.1	3.50	2.61	166.8	6.5	2.0	750	5.1	64
SD07165	8.7	57.5	5.25	3.14	166.9	6.5	3.0	745	5.1	75
SD07W053	9.9	56.1	3.63	2.71	166.0	6.5	2.5	740	5.0	62
SD08028	8.0	55.5	3.50	1.81	165.4	6.5	2.0	730	5.0	80
SD08080	9.2	57.7	4.25	2.81	167.2	6.7	3.0	750	5.2	70

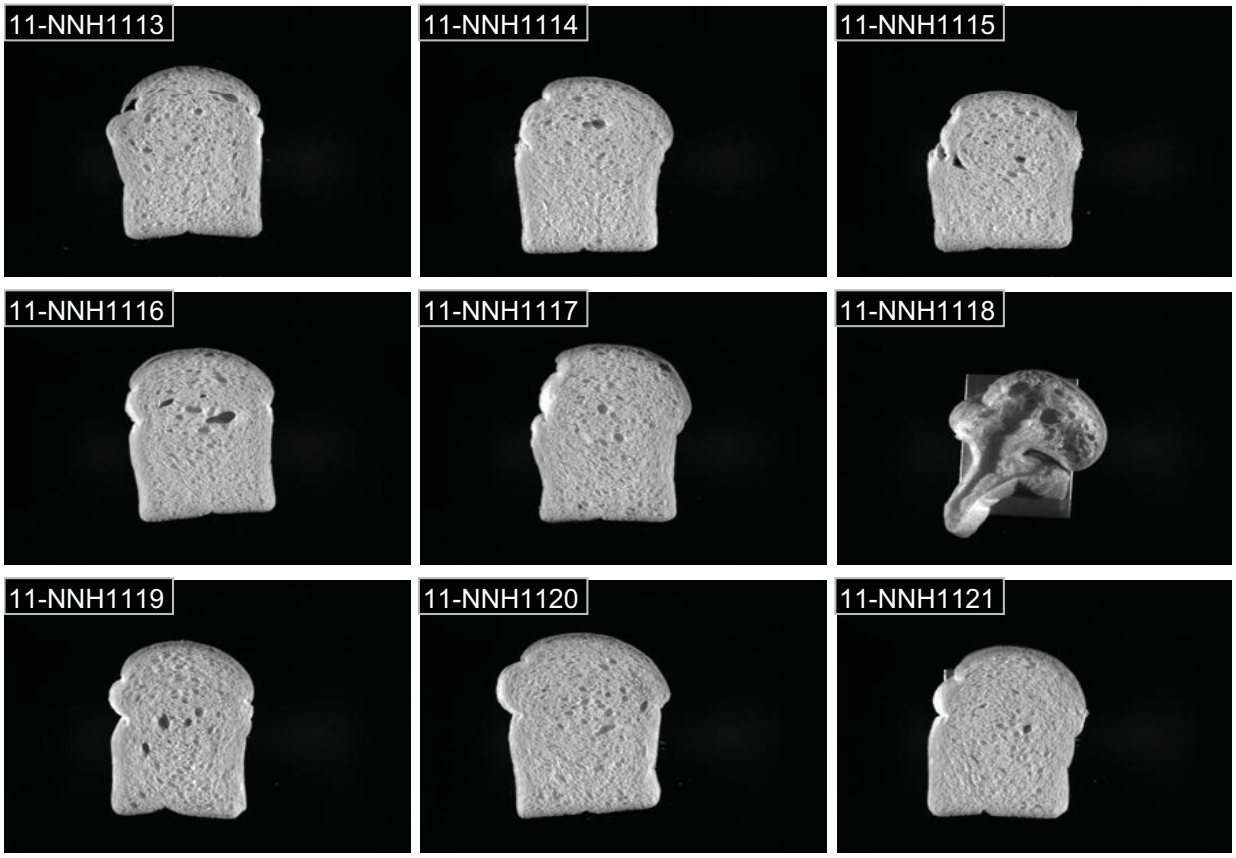
2011 NRPN Intraregional Production Zone

Northern High Plains



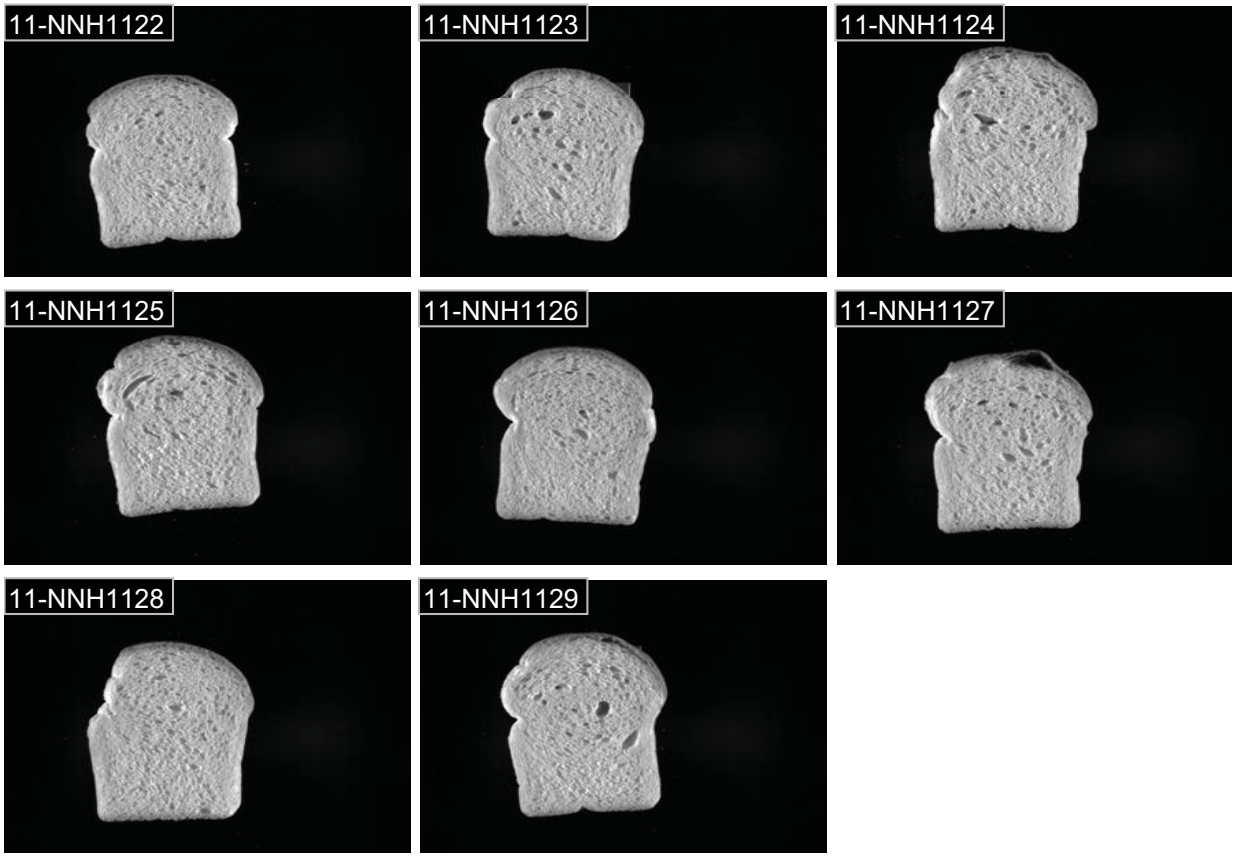
2011 NRPN Intraregional Production Zone

Northern High Plains



2011 NRPN Intraregional Production Zone

Northern High Plains



Hard Winter Wheat Quality Report

2011 NRPN-NP

1 - Test weight	10	11 - Flour protein	8
2 - SKCS kernel weight	8	12 - Bake absorption	15
3 - Kernel weight SD	8	13 - Mixograph absorption	5
4 - SKCS kernel diameter	8	14 - Bake mix time	10
5 - Kernel diameter SD	8	15 - Mixograph mix time	5
6 - SKCS hardness	10	16 - Mixograph tolerance	5
7 - Hardness SD	8	17 - Dough weight	
8 - Flour yield	30	18 - Proof height	2
9 - Flour ash	10	19 - Loaf volume	20
10 - Milling score		20 - Volume regression	5
		21 - Crumb grain	25

ID	Milling Score	Rating	%	Baking Score	Rating	%	1RS	Trait Deficiencies
Kharkof	45.3	Very Poor	80.3	51.1	Very Good	100.0		
Overland	53.8	Good	95.3	33.8	Good	66.2		11,16,
Wesley	52.5	Good	93.0	29.0	Average	56.7		
Jerry	51.9	Good	92.1	29.6	Average	58.0		21,
T150-1	44.5	Very Poor	78.8	26.0	Poor	51.0		8,14,15,
T179	42.0	Very Poor	74.4	43.8	Very Good	85.7		1,2,4,16,
T180	47.5	Poor	84.2	28.2	Average	55.2		5,16,21,
T181	46.9	Poor	83.1	15.6	Very Poor	30.6		3,16,19,20,21,
NE07531	54.0	Very Good	95.8	39.1	Very Good	76.5		3,15,21,
NE07627	49.7	Average	88.2	36.4	Good	71.3		
NW07534	48.0	Average	85.1	31.6	Good	61.9		3,21,
NE07487	51.5	Average	91.3	20.9	Very Poor	40.8		15,
NE07520	47.3	Poor	83.8	31.1	Good	60.9		15,
NI08708	46.2	Poor	82.0	29.0	Average	56.7		
NE06545	45.4	Very Poor	80.5	14.5	Very Poor	28.4		14,15,
NI07703	53.4	Good	94.7	26.0	Poor	50.9		9,16,
NE05496	53.7	Very Good	95.3	26.6	Poor	52.1		9,16,
NX04Y2107	50.2	Average	88.9	49.1	Very Good	96.1		9,10,21,
NW07505	51.0	Average	90.4	23.3	Poor	45.6		9,14,21,
SD05085-1	52.9	Good	93.9	37.3	Very Good	73.0		1,
Ideal	52.4	Good	92.9	26.8	Poor	52.3		14,15,
SD05W030	54.9	Very Good	97.4	27.7	Poor	54.3	1BL	16,21,
SD06158	48.0	Poor	85.1	21.3	Very Poor	41.8		15,
SD06W160-2	44.9	Very Poor	79.6	28.0	Average	54.7		4,13,16,
SD07126	51.1	Average	90.5	28.8	Average	56.4		16,18,20,21,
SD07165	46.0	Poor	81.6	22.0	Very Poor	43.1		5,14,15,
SD07W053	53.9	Very Good	95.5	17.4	Very Poor	34.0	1BL	4,16,18,19,20,21,
SD08028	45.5	Very Poor	80.6	32.0	Good	62.6		21,
SD08080	56.4	Very Good	100.0	30.0	Good	58.7		

Quality scores and ratings are calculated directly from the relative trait weightings (printed at the top of the page) and are applicable only to the nursery selected.

2011 NRPN Intraregional Production Zone

Northern Plains

		SKCS Average Kernel						Hardness			
		Moisture		Weight		Diameter		SKCS		Class	Distribution
LINE	Wt/Bu (lb)	(%)	(sd)	(mg)	(sd)	(mm)	(sd)		(sd)		
Kharkof	60.1	9.4	0.9	27.5	7.6	2.49	0.29	49	22	MIXED	23--20--24--33--03
Overland	59.4	9.4	0.9	27.8	8.4	2.48	0.33	68	19	HARD	03--11--22--64--01
Wesley	57.0	8.9	1.0	27.9	7.9	2.53	0.30	67	17	HARD	03--09--20--68--01
Jerry	57.9	9.1	0.9	28.3	8.0	2.45	0.30	61	18	HARD	05--17--23--55--01
T150-1	55.1	8.7	1.0	25.7	7.6	2.41	0.30	76	16	HARD	00--04--10--86--01
T179	54.6	8.7	1.0	22.1	6.4	2.33	0.26	71	19	HARD	02--10--14--74--01
T180	57.3	8.6	1.0	30.5	8.5	2.56	0.36	70	17	HARD	01--05--19--75--01
T181	57.6	9.0	1.0	28.1	9.1	2.49	0.34	67	19	HARD	05--09--19--67--01
NE07531	59.8	8.9	1.1	28.9	9.0	2.55	0.33	71	18	HARD	02--08--13--77--01
NE07627	57.5	8.8	1.0	24.6	7.6	2.38	0.31	67	19	HARD	03--11--21--65--01
NW07534	56.5	8.7	1.0	30.1	9.3	2.58	0.34	70	19	HARD	04--06--17--73--01
NE07487	58.0	9.0	1.0	24.4	6.9	2.42	0.28	68	17	HARD	02--10--17--71--01
NE07520	56.9	8.5	1.0	24.3	7.0	2.42	0.30	67	18	HARD	04--07--15--74--01
NI08708	55.8	8.5	1.0	26.7	8.3	2.45	0.34	60	19	HARD	08--17--21--54--02
NE06545	56.1	9.2	0.8	26.0	7.1	2.45	0.32	54	20	MIXED	14--18--26--42--03
NI07703	57.9	9.2	1.0	27.5	8.3	2.47	0.33	57	18	HARD	10--16--22--52--02
NE05496	57.8	8.9	0.9	26.8	7.7	2.50	0.31	66	21	HARD	05--08--20--67--01
NX04Y2107	58.4	8.8	0.9	29.7	8.2	2.64	0.30	69	16	HARD	01--08--14--77--01
NW07505	57.7	8.3	0.9	26.2	7.9	2.48	0.35	76	17	HARD	01--04--12--83--01
SD05085-1	50.7	9.1	0.8	28.3	7.7	2.52	0.33	62	19	HARD	07--13--23--57--02
Ideal (SD05118-1)	58.5	8.5	1.0	24.8	7.4	2.38	0.29	68	18	HARD	03--09--18--70--01
SD05W030	59.3	8.7	0.9	26.5	6.8	2.45	0.29	74	17	HARD	01--05--10--84--01
SD06158	59.0	8.3	0.9	25.9	8.1	2.43	0.33	63	19	HARD	06--12--20--62--02
SD06W160-2	56.6	8.4	0.9	24.3	7.5	2.34	0.32	71	20	HARD	04--09--15--72--01
SD07126	58.5	8.9	0.9	27.1	7.6	2.49	0.30	68	18	HARD	04--06--18--72--01
SD07165	57.6	8.8	0.8	26.5	9.0	2.46	0.36	64	20	HARD	06--14--20--60--02
SD07W053	59.5	8.3	1.0	24.3	6.3	2.33	0.26	73	18	HARD	02--06--14--78--01
SD08028	56.8	9.5	0.8	27.0	8.2	2.44	0.35	62	22	MIXED	12--14--19--55--03
SD08080	58.2	8.8	0.8	28.0	7.1	2.50	0.29	59	17	HARD	09--15--27--49--02

2011 NRPN Intraregional Production Zone

Northern Plains

	Wheat		Flour			Noodle Color					
LINE	Protein (%)	Milling Yield (%)	Ash (%)	Protein (%)	PPO	L @ 0	a @ 0	b @ 0	Delta L 24 hrs	Delta a 24 hrs	Delta b 24 hrs
Kharkof	13.2	66.3	0.42	11.2	0.562	81.26	-0.86	21.08	-10.23	0.99	3.05
Overland	10.6	70.3	0.44	9.1	0.527	81.77	-0.78	19.80	-10.37	1.17	4.48
Wesley	11.7	68.8	0.43	10.6	0.652	81.80	-0.67	20.93	-10.21	1.11	4.00
Jerry	11.7	69.2	0.41	10.0	0.676	82.20	-0.93	21.64	-11.55	0.85	6.12
T150-1	12.5	64.7	0.45	10.7	0.566	81.62	-0.14	20.17	-12.46	0.98	4.17
T179	13.3	65.8	0.49	11.7	0.830	79.06	-0.42	20.83	-12.06	1.50	4.23
T180	11.8	66.0	0.45	10.3	0.681	81.15	-0.56	21.16	-13.10	1.23	2.51
T181	12.9	67.2	0.43	11.2	0.851	79.70	-1.13	25.93	-11.69	0.95	1.71
NE07531	11.8	69.4	0.45	10.5	0.657	81.50	-0.72	21.61	-11.69	1.26	2.87
NE07627	11.3	68.5	0.41	9.6	0.579	82.30	-0.76	20.88	-11.53	1.21	4.83
NW07534	11.7	67.6	0.43	10.0	0.700	82.60	-0.42	20.41	-13.63	1.40	4.35
NE07487	11.2	67.6	0.40	9.6	0.214	80.90	-1.34	23.26	-5.90	0.60	2.22
NE07520	12.6	66.0	0.40	10.6	0.624	80.89	-0.58	22.02	-12.28	1.17	3.46
NI08708	11.6	67.9	0.40	9.8	0.718	80.51	-1.07	23.64	-8.42	1.22	0.93
NE06545	11.4	67.1	0.39	9.6	0.556	81.64	-0.98	22.90	-10.74	1.16	5.14
NI07703	11.6	72.8	0.51	9.8	0.571	80.53	-0.89	22.95	-13.56	1.60	5.99
NE05496	11.1	73.2	0.54	9.6	0.631	81.41	-0.95	21.82	-18.60	2.52	6.72
NX04Y2107	11.9	67.1	0.52	10.1	0.765	85.41	-1.38	20.04	-12.53	1.84	2.69
NW07505	10.9	70.0	0.56	9.7	0.598	82.48	-0.70	20.84	-18.56	3.20	2.99
SD05085-1	11.0	71.9	0.40	9.5	0.497	82.68	-1.26	21.28	-12.06	1.09	4.89
Ideal (SD05118-1)	11.8	68.3	0.39	9.9	0.624	81.59	-0.98	21.65	-9.67	0.79	4.80
SD05W030	11.5	68.0	0.43	10.2	0.348	83.12	-1.30	22.55	-10.38	1.07	5.48
SD06158	11.5	66.9	0.40	10.0	0.608	82.41	-0.78	19.39	-11.21	0.98	4.25
SD06W160-2	11.5	66.3	0.40	10.4	0.734	81.49	-1.09	22.79	-10.62	1.08	2.26
SD07126	12.6	67.4	0.42	11.5	0.698	80.81	-1.34	25.78	-11.68	0.95	2.05
SD07165	11.0	67.6	0.41	10.0	0.620	83.78	-1.34	21.63	-12.38	1.56	4.43
SD07W053	12.3	67.5	0.39	10.7	0.748	82.07	-1.44	23.63	-10.38	1.33	1.97
SD08028	11.0	68.3	0.41	9.4	0.564	81.23	-1.24	23.26	-9.69	1.38	2.28
SD08080	11.2	70.3	0.38	10.0	0.556	80.98	-0.69	20.62	-9.53	1.05	2.58

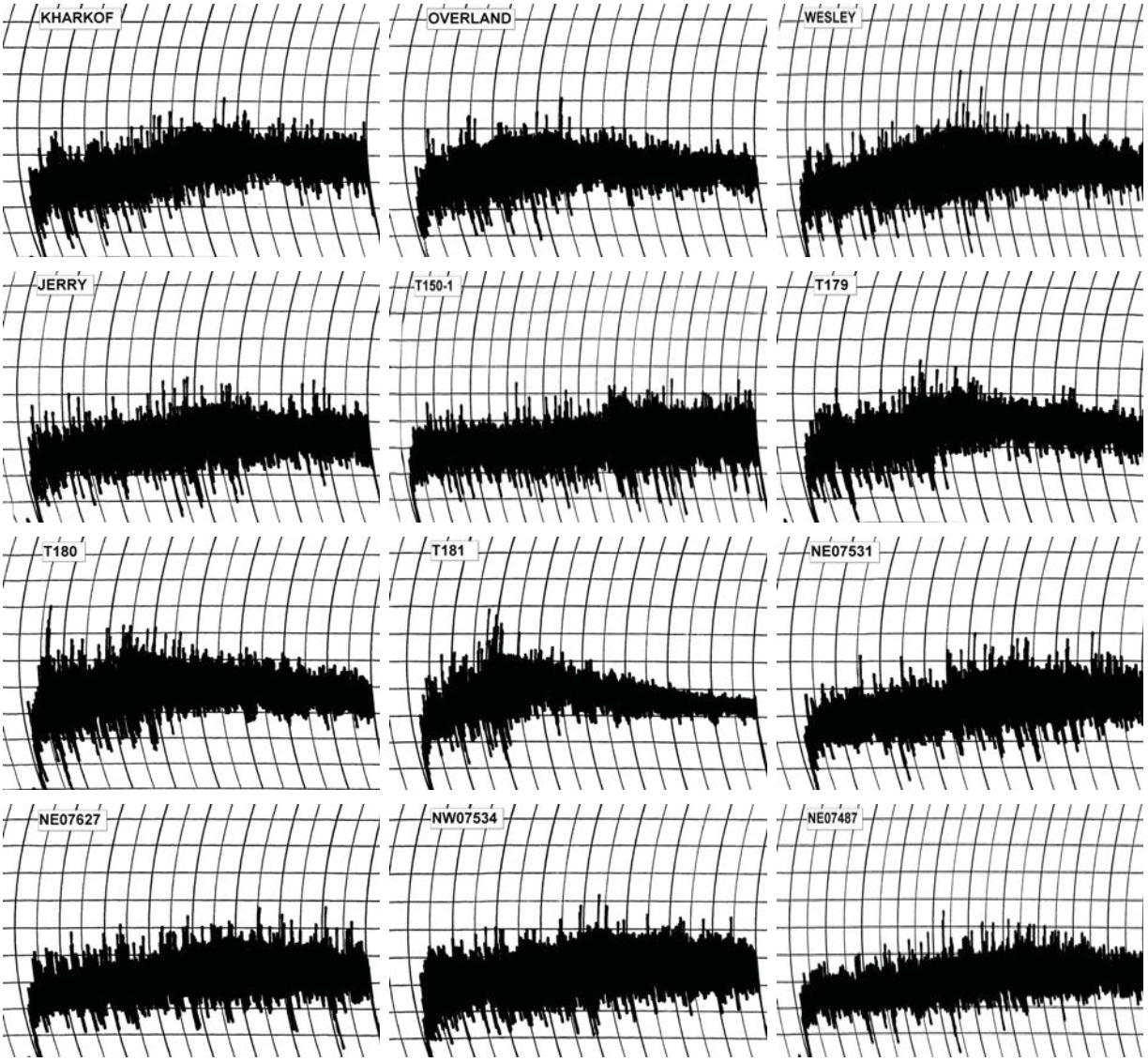
2011 NRPN Intraregional Production Zone

Northern Plains

		Mixograph			
	Flour Protein	Absorption	As-Is	Corrected	Tolerance
Line	(%)	(%)	(min)	(min)	
Kharkof	11.2	61.6	4.50	4.05	4
Overland	9.1	59.0	3.38	2.19	2
Wesley	10.6	60.1	5.13	4.25	3
Jerry	10.0	60.2	4.50	3.40	3
T150-1	10.7	60.2	6.38	5.37	5
T179	11.7	61.4	3.63	3.52	2
T180	10.3	59.8	2.63	2.08	2
T181	11.2	61.9	2.38	2.14	1
NE07531	10.5	61.2	5.38	4.41	4
NE07627	9.6	58.7	4.88	3.49	4
NW07534	10.0	60.5	4.38	3.33	4
NE07487	9.6	58.5	6.50	4.62	3
NE07520	10.6	61.1	5.75	4.75	4
NI08708	9.8	59.7	5.13	3.76	3
NE06545	9.6	59.5	7.88	5.57	3
NI07703	9.8	60.4	3.38	2.50	1
NE05496	9.6	60.8	4.00	2.87	2
NX04Y2107	10.1	68.0	4.00	3.09	3
NW07505	9.7	62.5	5.13	3.73	3
SD05085-1	9.5	58.9	4.38	3.06	4
Ideal (SD05118-1)	9.9	59.7	7.50	5.62	5
SD05W030	10.2	60.3	4.00	3.14	2
SD06158	10.0	59.7	6.50	4.97	4
SD06W160-2	10.4	56.8	4.25	3.42	2
SD07126	11.5	60.1	4.13	3.89	2
SD07165	10.0	59.4	5.50	4.17	5
SD07W053	10.7	58.6	3.50	2.94	2
SD08028	9.4	57.9	3.50	2.41	3
SD08080	10.0	59.3	4.50	3.41	4

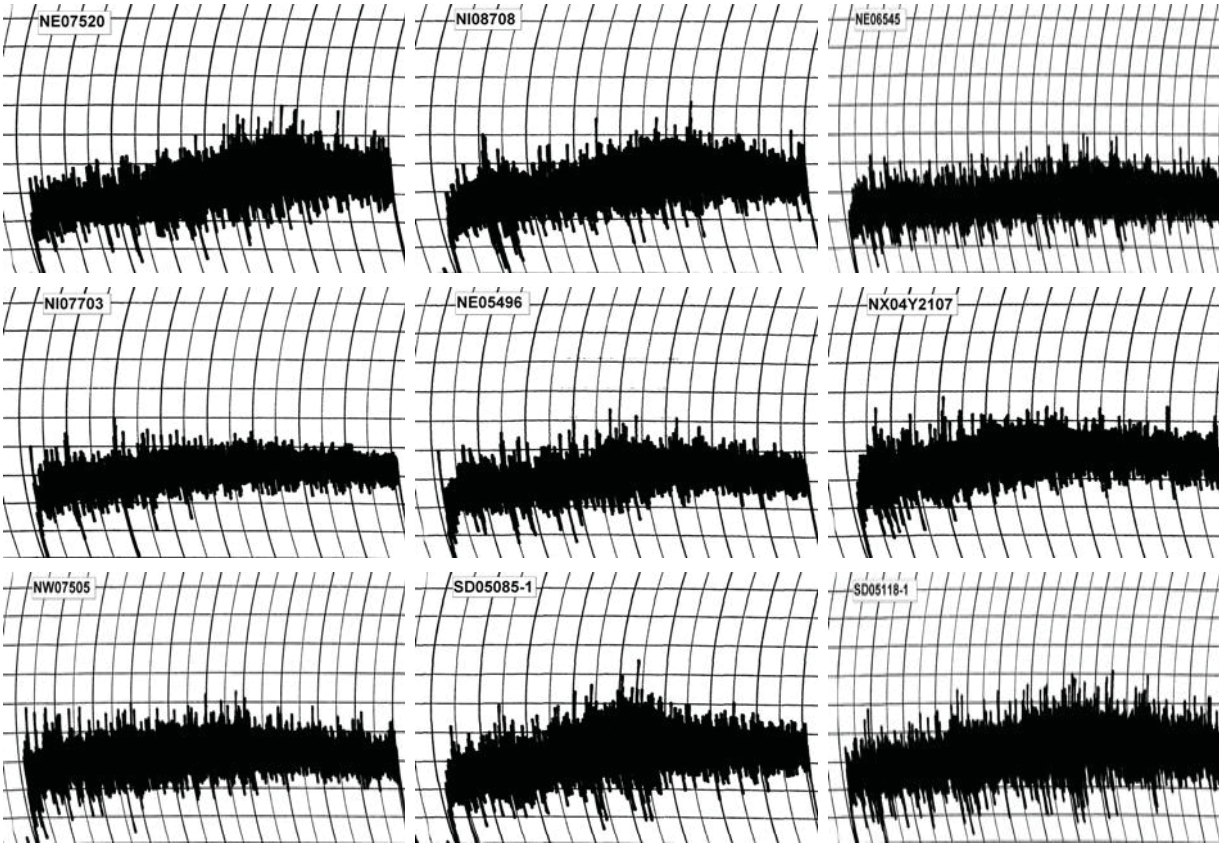
2011 NRPN Intraregional Production Zone

Northern Plains



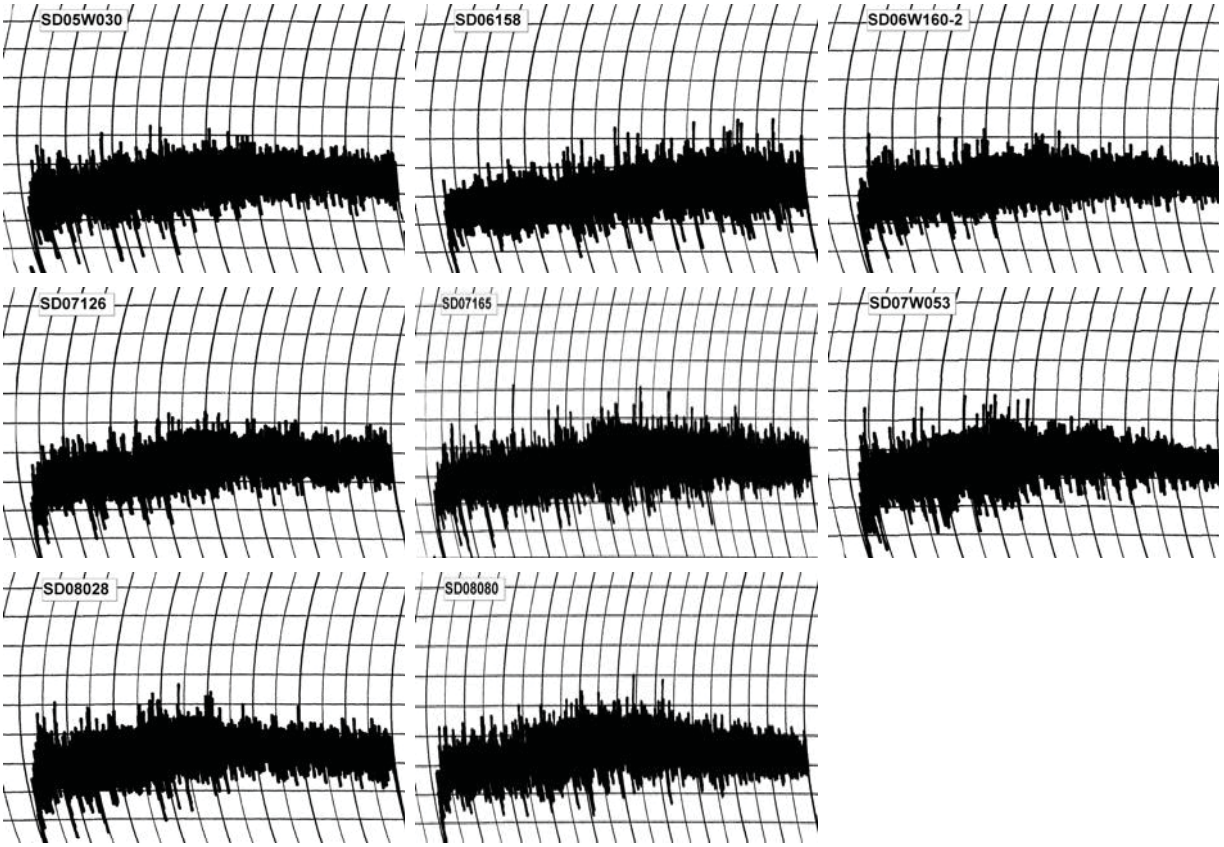
2011 NRPN Intraregional Production Zone

Northern Plains



2011 NRPN Intraregional Production Zone

Northern Plains



2011 NRPN Intraregional Production Zone

Northern Plains

	RVA							
Line	Stirring Number (RVU)	Peak Viscosity (RVU)	Trough Viscosity (RVU)	Breakdown (RVU)	Final Viscosity (RVU)	Set back (RVU)	Peak Time (min)	Pasting Temp (Deg. C)
Kharkof	149.75	222.75	143.25	79.50	251.50	108.25	6.27	86.45
Overland	138.42	204.58	130.58	74.00	234.00	103.42	6.20	85.70
Wesley	134.42	194.08	124.42	69.67	230.58	106.17	6.20	86.55
Jerry	122.67	160.00	90.42	69.58	180.08	89.67	5.87	83.20
T150-1	120.75	211.67	122.42	89.25	221.00	98.58	6.27	69.45
T179	156.83	225.08	148.08	77.00	263.33	115.25	6.33	69.50
T180	94.42	130.17	54.08	76.08	114.92	60.83	5.53	67.70
T181	139.25	178.92	117.83	61.08	225.17	107.33	6.13	85.70
NE07531	106.17	157.33	65.08	92.25	136.67	71.58	5.80	69.40
NE07627	125.83	175.67	100.92	74.75	196.08	95.17	6.00	84.85
NW07534	113.67	138.50	61.08	77.42	133.67	72.58	5.67	81.65
NE07487	117.83	213.83	122.25	91.58	233.42	111.17	6.07	84.80
NE07520	99.50	161.92	72.42	89.50	149.83	77.42	5.93	69.55
NI08708	125.25	188.92	110.83	78.08	210.92	100.08	6.07	84.90
NE06545	122.75	242.42	151.08	91.33	273.50	122.42	6.20	83.20
NI07703	116.58	185.33	108.83	76.50	203.08	94.25	6.07	84.75
NE05496	115.17	227.92	123.58	104.33	216.75	93.17	6.27	70.15
NX04Y2107	24.42	41.00	6.25	34.75	9.42	3.17	3.33	69.45
NW07505	59.83	86.92	20.58	66.33	46.83	26.25	5.13	69.55
SD05085-1	135.67	205.92	129.92	76.00	242.00	112.08	6.13	85.60
Ideal (SD05118-1)	140.25	203.92	138.33	65.58	251.42	113.08	6.20	86.45
SD05W030	125.92	139.67	74.67	65.00	153.83	79.17	5.80	82.40
SD06158	154.08	192.17	130.17	62.00	236.75	106.58	6.20	86.60
SD06W160-2	120.83	134.58	75.67	58.92	157.92	82.25	5.80	83.35
SD07126	154.75	209.00	133.42	75.58	244.17	110.75	6.27	85.75
SD07165	171.25	252.42	166.50	85.92	282.08	115.58	6.40	86.50
SD07W053	94.25	41.92	24.58	17.33	56.92	32.33	5.33	89.05
SD08028	131.25	186.17	110.67	75.50	203.50	92.83	6.07	84.10
SD08080	152.67	219.50	142.75	76.75	254.17	111.42	6.27	86.45

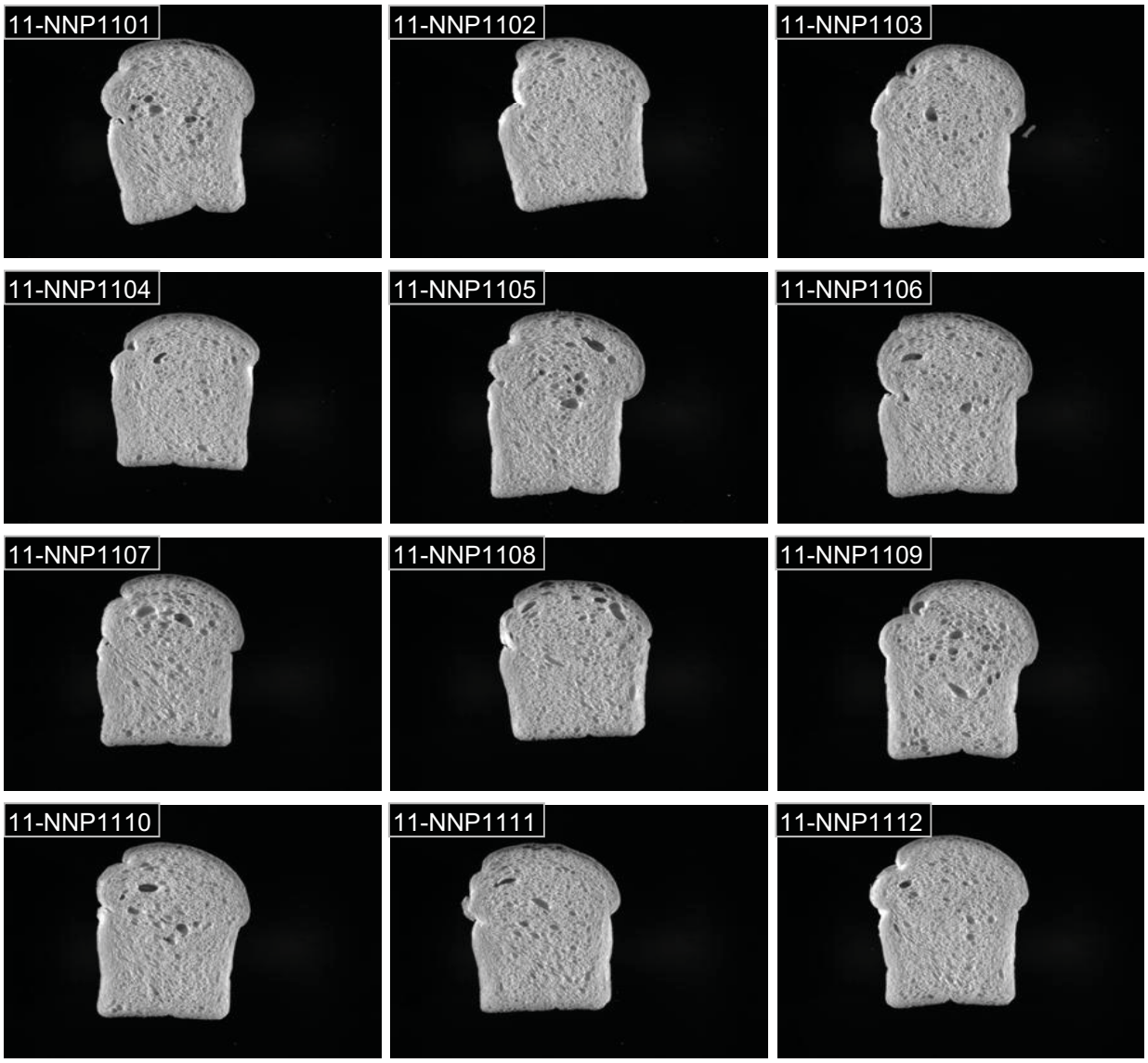
2011 NRPN Intraregional Production Zone

Northern Plains

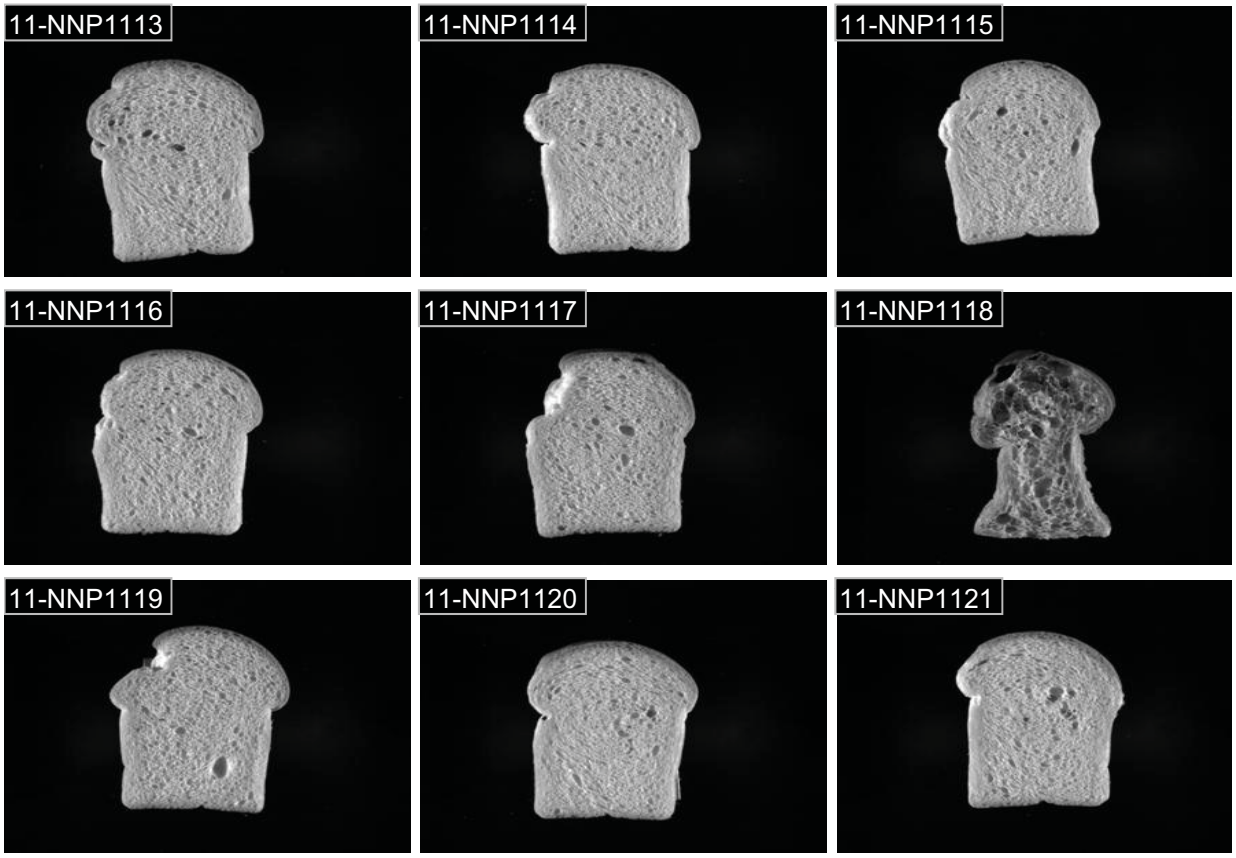
	Flour		Mix Time		Dough					
	Protein	Water Abs.	As-is	Corrected	Weight	Proof Height	Crumb Grain	As-Rec'd.	Specific Volume	Loaf Volume Potential
Line	(%)	(%)	(min)	(min)	(g)	(cm)		(cc)	(cc/g)	(cc/%)
Kharkof	11.2	60.6	5.63	5.06	169.9	7.3	4.0	855	5.8	68
Overland	9.1	57.8	3.25	2.10	167.6	7.4	3.0	785	5.3	77
Wesley	10.6	59.1	6.63	5.49	168.3	6.9	3.2	880	6.1	76
Jerry	10.0	59.0	5.25	3.97	168.4	6.3	2.0	715	4.8	58
T150-1	10.7	60.2	10.00	8.42	168.5	7.5	3.8	875	5.9	74
T179	11.7	59.3	4.25	4.12	168.7	7.0	3.0	860	5.9	64
T180	10.3	59.4	3.75	2.96	168.9	6.5	2.0	770	5.2	64
T181	11.2	59.3	2.75	2.47	169.0	6.5	1.5	695	4.6	48
NE07531	10.5	60.9	5.25	4.31	170.2	7.0	2.0	845	5.7	72
NE07627	9.6	59.0	6.13	4.38	168.7	6.7	3.0	795	5.4	73
NW07534	10.0	59.8	6.00	4.57	169.1	6.6	2.0	745	5.1	62
NE07487	9.6	58.1	6.75	4.79	167.6	6.5	3.5	810	5.5	75
NE07520	10.6	57.1	5.50	4.54	166.6	7.1	3.4	885	6.2	77
NI08708	9.8	59.2	5.63	4.12	169.3	6.8	2.8	830	5.6	76
NE06545	9.6	57.0	7.63	5.39	165.9	6.9	2.8	755	5.2	67
NI07703	9.8	56.1	4.00	2.96	165.6	6.8	2.2	790	5.4	70
NE05496	9.6	57.9	6.75	4.84	166.8	6.7	2.5	800	5.5	73
NX04Y2107	10.1	65.5	4.25	3.29	174.8	7.2	0.0	920	6.2	86
NW07505	9.7	57.8	8.50	6.18	166.4	6.6	1.0	790	5.4	71
SD05085-1	9.5	57.6	6.00	4.19	166.9	6.8	3.0	795	5.5	74
Ideal (SD05118-1)	9.9	59.9	9.38	7.03	168.3	6.3	3.0	740	5.0	62
SD05W030	10.2	59.8	4.50	3.54	169.8	6.4	1.5	750	5.0	61
SD06158	10.0	59.2	7.00	5.35	168.4	6.6	2.8	790	5.4	68
SD06W160-2	10.4	57.1	4.50	3.62	166.3	6.8	2.8	825	5.6	70
SD07126	11.5	58.7	4.50	4.24	168.4	6.1	1.0	745	5.0	52
SD07165	10.0	58.9	8.00	6.06	167.6	6.7	4.2	825	5.6	74
SD07W053	10.7	57.3	3.50	2.94	166.9	6.0	1.5	690	4.6	50
SD08028	9.4	56.9	4.25	2.93	166.7	6.4	2.0	800	5.5	76
SD08080	10.0	59.0	5.50	4.17	168.5	6.8	3.5	800	5.5	70

2011 NRPN Intraregional Production Zone

Northern Plains

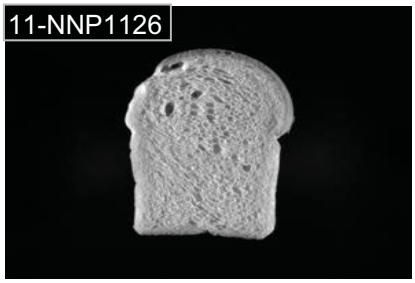


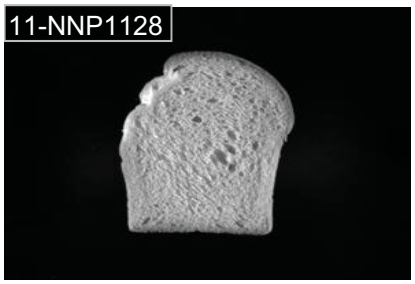
2011 NRPN Intraregional Production Zone
Northern Plains

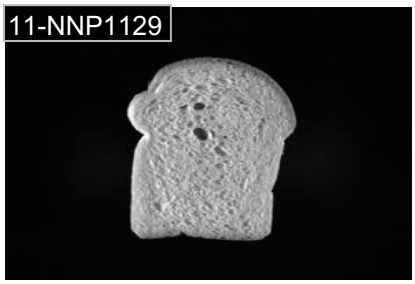


2011 NRPN Intraregional Production Zone

Northern Plains







Southern
Regional Performance Nursery

2011 SRPN Intraregional Production Zone

Entry	Selection No.	Pedigree	Source
1	Kharkof	Kharkof	check
2	Scout 66	Scout 66	check
3	TAM-107	TAM-107	check
4	Fuller	Fuller	check
5	Clara CL (KS08HW35-1)	KS03HW154/KS03HW1	KSU Hays
6	Iba (OK07209)	OK93P656-RMH3299/OK99621 F4:11	OSU
7	Gallagher (OK07214)	OK93P656-RMH3299/OK99711 F4:11	OSU
8	OK07231	OK92P577-RMH3099/OK93P656-RMH3299 F4:11	OSU
9	OK08328	GK Keve/Ok101//OK93P656-RMH3299 F4:10	OSU
10	OK07218	OK99219/OK99621 F4:11	OSU
11	OK06336	Magvars/2174//Enhancer F4:12	OSU
12	KS020822-M-5	KS950409-P-4/KS940786-17-3//KS920709-B-5-2-2	KSU Manhattan
13	KS020638-5-1	KS940786-17-2/JAGALENE//TREGO	KSU Manhattan
14	KS020319-7-2	KS940786-6-4/K92//Cutter	KSU Manhattan
15	KS020319-7-3	KS940786-6-4/K92//Cutter	KSU Manhattan
16	CO050233-2	CO950043/Above//CO970547	CSU
17	Denali (CO050303-2)	CO980829/TAM 111	CSU
18	CO050337-2	CO980829/TAM 111	CSU
19	Brawl CL Plus (CO06052)	Teal 11A/Above//CO99314	CSU
20	Byrd (CO06424)	TAM 112/CO970547-7	CSU
25	NE06430	WESLEY (N95L158)=(KS831936-3//COLT/CODY)/3/KS9U241//IKE/TXGH1	UNL
26	NE07444	KS96HW10-3=(KS91HW29// RIO BLANCO/KS91H184)/WAHOO/NE99585	UNL
27	NE06607	NE98466=(KS89H50-4/NE90518(=BRL//SXL/BENN))/WESLEY	UNL
28	NI08708	CO980829 (=Yuma/T-57//CO850034/3/4*Yuma/4/NEWS1)/Wesley	UNL
29	TX06A001281	TX98VR8422/U3704A-7-7	TAMU
30	TX05V7259	T107//TX78V3620/Ctk78/3/TX87V1233/4/Arap//TX86V1540/T200	TAMU
31	TX05A001188	T107//TX98V3620/Ctk78/3/TX87V1233/4/N87V106//TX86V1540/T200	TAMU
32	TX07A001505	T107//TX98V3620/Ctk78/3/TX87V1233/4/N87V106//TX86V1540/T200	TAMU
33	TX03A0563-07AZHR247	X96V107/OGALLALA	TAMU
34	TX07A001118	Composite	TAMU
35	TX07A001305	TX98A0212/T-110	TAMU
36	TX06V7266	TX99U8617/TX97U2001	TAMU
37	CO050322	CO980829/TAM 111	CSU
38	CO05W111	CO980829/TAM 111	CSU

Hard Winter Wheat Quality Report

2011 SRPN-NCP

1 - Test weight	10	11 - Flour protein	8
2 - SKCS kernel weight	8	12 - Bake absorption	15
3 - Kernel weight SD	8	13 - Mixograph absorption	5
4 - SKCS kernel diameter	8	14 - Bake mix time	10
5 - Kernel diameter SD	8	15 - Mixograph mix time	5
6 - SKCS hardness	10	16 - Mixograph tolerance	5
7 - Hardness SD	8	17 - Dough weight	
8 - Flour yield	30	18 - Proof height	2
9 - Flour ash	10	19 - Loaf volume	20
10 - Milling score		20 - Volume regression	5
		21 - Crumb grain	25

ID	Milling Score	Rating	%	Baking Score	Rating	%	1RS	Trait Deficiencies
Kharkof	45.7	Very Poor	77.5	54.7	Very Good	92.4		2,
Scout 66	59.1	Very Good	100.0	43.3	Good	73.3		
TAM 107	44.8	Very Poor	75.9	50.6	Very Good	85.6	1AL	1,3,5,
Fuller	49.9	Very Poor	84.6	50.5	Very Good	85.4		10,
Clara CL	49.2	Very Poor	83.3	34.2	Poor	57.8		8,10,15,
Iba	57.7	Very Good	97.7	34.7	Poor	58.7		
Gallagher	52.8	Poor	89.5	45.6	Good	77.2		5,
OK07231	58.7	Very Good	99.5	33.4	Poor	56.4		15,
OK08328	55.5	Good	93.9	24.7	Very Poor	41.7		12,13,16,17,18,19,20,21,
OK07218	54.8	Average	92.8	30.2	Very Poor	51.0		15,
OK06336	48.4	Very Poor	82.0	42.9	Good	72.6		5,8,15,21,
KS020822-M-5	55.3	Good	93.7	43.3	Good	73.2		2,4,21,
KS020638-5-1	56.9	Good	96.4	40.6	Average	68.7		21,
KS020319-7-2	55.1	Good	93.3	51.5	Very Good	87.0		
KS020319-7-3	55.5	Good	94.0	38.6	Average	65.2		
CO050233-2	54.9	Average	92.9	33.6	Average	56.8		16,
Denali	50.8	Poor	86.1	33.4	Poor	56.4		4,16,21,
CO050337-2	50.0	Poor	84.7	48.1	Good	81.3		
Brawl CL Plus	57.4	Very Good	97.2	59.2	Very Good	100.0		
Byrd	54.0	Average	91.5	27.5	Very Poor	46.5		2,4,14,15,17,
NE06430	51.2	Poor	86.6	33.8	Poor	57.1		14,15,
NE07444	55.4	Good	93.8	21.2	Very Poor	35.8		9,14,15,
NE06607	57.2	Very Good	96.8	41.8	Average	70.6		15,
NI08708	50.8	Poor	86.0	30.7	Poor	51.9		1,5,18,19,20,
TX06A001281	53.4	Average	90.4	41.2	Average	69.7		21,
TX05V7259	53.5	Average	90.7	17.4	Very Poor	29.4		14,15,18,19,20,
TX05A001188	52.6	Poor	89.1	47.4	Good	80.2		
TX07A001505	57.4	Very Good	97.2	28.8	Very Poor	48.7		14,15,17,
TX03A0563-07AZHR247	52.3	Poor	88.6	49.3	Good	83.4		
TX07A001118	56.1	Good	95.0	25.2	Very Poor	42.5		2,4,9,14,15,

Quality scores and ratings are calculated directly from the relative trait weightings (printed at the top of the page) and are applicable only to the nursery selected.

Hard Winter Wheat Quality Report

2011 SRPN-NCP

1 - Test weight	10	11 - Flour protein	8
2 - SKCS kernel weight	8	12 - Bake absorption	15
3 - Kernel weight SD	8	13 - Mixograph absorption	5
4 - SKCS kernel diameter	8	14 - Bake mix time	10
5 - Kernel diameter SD	8	15 - Mixograph mix time	5
6 - SKCS hardness	10	16 - Mixograph tolerance	5
7 - Hardness SD	8	17 - Dough weight	
8 - Flour yield	30	18 - Proof height	2
9 - Flour ash	10	19 - Loaf volume	20
10 - Milling score		20 - Volume regression	5
		21 - Crumb grain	25

ID	Milling Score	Rating	%	Baking Score	Rating	%	1RS	Trait Deficiencies
TX07A001305	47.8	Very Poor	81.0	37.7	Average	63.8		5,8,
TX06V7266	54.5	Average	92.4	29.9	Poor	50.5		
CO050322	48.2	Very Poor	81.7	38.6	Average	65.3		11,13,19,
CO05W111	54.6	Average	92.5	48.2	Very Good	81.5		

2011 SRPN Intraregional Production Zone

North Central Plains

		SKCS Average Kernel						Hardness			
		Moisture		Weight		Diameter		SKCS		Class	Distribution
LINE	Wt/Bu (lb)	(%)	(sd)	(mg)	(sd)	(mm)	(sd)		(sd)		
Kharkof	58.2	11.8	0.5	27.6	7.0	2.52	0.29	43	22	MIXED	33--25--22--20--03
Scout 66	58.5	11.9	0.5	31.7	8.6	2.66	0.32	54	17	HARD	09--24--30--37--02
TAM-107	55.6	12.1	0.5	31.7	9.9	2.61	0.37	59	20	HARD	09--17--22--52--02
Fuller	57.5	12.2	0.5	29.9	8.9	2.66	0.33	57	17	HARD	07--16--28--49--02
Clara CL (KS08HW35-1)	58.4	12.2	0.5	30.7	8.5	2.66	0.33	62	19	HARD	04--19--25--52--01
Iba (OK07209)	59.8	12.5	0.5	31.3	9.3	2.68	0.36	49	17	MIXED	20--27--28--25--03
Gallagher (OK07214)	58.8	12.7	0.5	30.9	9.7	2.66	0.37	65	18	HARD	05--08--23--64--01
OK07231	58.3	11.1	0.5	29.6	7.8	2.65	0.31	75	17	HARD	00--04--11--85--01
OK08328	58.1	11.6	0.4	31.3	9.1	2.69	0.35	62	17	HARD	03--16--26--55--01
OK07218	58.4	11.6	0.5	32.3	9.1	2.67	0.34	57	17	HARD	06--19--34--41--02
OK06336	57.8	11.7	0.5	32.9	9.2	2.71	0.37	64	18	HARD	04--14--21--61--01
KS020822-M-5	58.9	11.4	0.5	25.3	7.0	2.50	0.29	62	20	HARD	04--18--27--51--01
KS020638-5-1	58.8	11.4	0.5	30.7	8.6	2.68	0.33	57	19	HARD	09--21--28--42--02
KS020319-7-2	59.2	11.3	0.5	30.5	8.3	2.61	0.30	62	19	HARD	07--13--26--54--02
KS020319-7-3	59.1	11.8	0.5	31.6	8.3	2.64	0.30	58	19	HARD	08--18--30--44--02
CO050233-2	57.4	12.2	0.5	30.5	7.9	2.64	0.33	55	17	HARD	09--22--28--41--02
Denali (CO050303-2)	57.7	12.1	0.5	30.0	8.7	2.52	0.34	52	19	MIXED	14--25--24--37--03
CO050337-2	57.1	12.2	0.6	29.9	9.2	2.54	0.33	55	18	HARD	09--21--30--40--02
Brawl CL Plus (CO06052)	58.4	12.1	0.5	31.5	8.2	2.68	0.30	58	16	HARD	04--22--30--44--01
Byrd (CO06424)	57.8	12.5	0.5	27.6	8.7	2.47	0.34	55	19	HARD	10--20--32--38--02
NE06430	56.9	12.4	0.5	30.5	9.1	2.59	0.34	49	18	MIXED	19--29--25--27--03
NE07444	57.3	12.4	0.5	30.6	9.1	2.64	0.32	61	17	HARD	05--13--30--52--01
NE06607	57.0	12.5	0.5	29.8	8.2	2.60	0.32	55	17	HARD	08--21--32--39--02
NI08708	56.3	11.8	0.6	31.0	9.6	2.64	0.37	54	18	MIXED	11--22--30--37--03
TX06A001281	58.0	12.5	0.5	31.3	8.9	2.63	0.31	58	15	HARD	04--16--36--44--01
TX05V7259	58.7	12.2	0.4	30.6	8.4	2.66	0.32	66	17	HARD	01--11--24--64--01
TX05A001188	57.8	12.4	0.5	28.8	9.1	2.57	0.34	60	17	HARD	04--16--30--50--01
TX07A001505	59.3	12.4	0.5	31.0	8.5	2.62	0.32	57	16	HARD	05--20--35--40--01
TX03A0563-07AZHR247	58.1	12.5	0.5	29.8	8.8	2.62	0.33	59	17	HARD	07--18--24--51--02
TX07A001118	59.4	12.9	0.5	25.8	7.8	2.50	0.31	69	18	HARD	02--07--19--72--01
TX07A001305	57.3	12.6	0.5	30.1	9.0	2.65	0.37	63	18	HARD	03--14--29--54--01
TX06V7266	57.4	13.0	0.5	29.3	7.1	2.59	0.29	53	16	HARD	09--23--34--34--02
CO050322	57.3	12.9	0.5	30.2	8.8	2.58	0.34	49	18	MIXED	19--26--30--25--03
CO05W111	58.7	12.5	0.6	28.6	7.7	2.54	0.32	55	17	HARD	10--22--26--42--02

2011 SRPN Intraregional Production Zone

North Central Plains

	Wheat		Flour			Noodle Color					
LINE	Protein (%)	Milling Yield (%)	Ash (%)	Protein (%)	PPO	L @ 0	a @ 0	b @ 0	Delta L 24 hrs	Delta a 24 hrs	Delta b 24 hrs
Kharkof	14.1	68.0	0.44	12.6	0.611	79.57	-0.98	23.03	-8.12	2.59	-2.06
Scout 66	13.6	72.7	0.41	12.3	0.612	80.55	-0.40	20.93	-9.09	2.68	-1.41
TAM-107	13.1	68.0	0.43	11.5	0.661	79.43	-0.76	24.46	-11.67	2.93	-0.97
Fuller	14.9	68.2	0.42	11.5	0.648	79.61	-0.24	23.22	-12.33	2.35	-1.66
Clara CL (KS08HW35-1)	13.2	67.5	0.45	11.2	0.635	80.10	-0.95	23.33	-11.17	2.68	-1.56
Iba (OK07209)	12.1	72.2	0.38	10.6	0.568	81.42	-1.36	22.12	-9.15	2.87	-1.00
Gallagher (OK07214)	12.9	69.9	0.44	11.4	0.261	80.78	-1.09	24.02	-10.32	-0.13	0.11
OK07231	12.9	70.3	0.43	11.4	0.221	80.41	-0.31	21.87	-9.85	1.35	3.84
OK08328	12.3	70.5	0.41	11.0	0.552	79.61	-0.46	22.75	-10.64	1.35	2.39
OK07218	12.5	70.1	0.40	11.3	0.648	80.80	-0.96	24.42	-10.18	0.96	2.95
OK06336	13.7	66.7	0.44	12.2	0.612	79.63	-0.83	24.52	-9.52	1.09	1.32
KS020822-M-5	13.7	71.1	0.40	12.0	0.699	79.29	-0.88	24.85	-10.61	2.03	0.89
KS020638-5-1	13.3	71.7	0.40	11.5	0.729	79.54	-0.72	23.77	-10.40	2.23	0.46
KS020319-7-2	12.6	70.1	0.42	11.1	0.648	79.51	-0.66	23.60	-9.15	1.46	1.06
KS020319-7-3	13.0	70.5	0.43	11.3	0.601	78.83	-0.32	22.21	-9.93	2.40	0.49
CO050233-2	12.9	70.5	0.42	11.6	0.775	79.62	-0.37	23.14	-11.10	2.66	1.76
Denali (CO050303-2)	12.4	70.6	0.44	10.9	0.647	79.21	-0.82	24.75	-10.65	1.96	1.23
CO050337-2	12.1	69.7	0.43	10.5	0.668	80.60	-1.09	24.96	-10.84	1.63	1.07
Brawl CL Plus (CO06052)	13.8	70.5	0.42	12.3	0.740	80.41	-0.87	23.16	-9.54	2.98	-2.00
Byrd (CO06424)	12.1	72.4	0.42	10.9	0.711	80.61	-0.77	23.35	-11.51	2.59	0.23
NE06430	12.5	70.6	0.40	11.1	0.779	80.57	-0.33	20.24	-11.80	1.51	2.52
NE07444	12.8	71.7	0.46	11.1	0.677	79.27	-0.65	22.93	-9.06	1.64	0.77
NE06607	13.1	72.9	0.43	11.5	0.722	80.52	-0.40	20.12	-12.43	1.03	3.10
NI08708	13.2	70.7	0.43	11.6	0.796	80.35	-0.19	20.08	-10.86	2.21	-0.32
TX06A001281	13.6	69.1	0.44	11.8	0.719	79.03	-0.35	22.72	-11.59	1.63	0.93
TX05V7259	13.0	68.5	0.43	11.1	0.721	82.16	-0.55	19.39	-12.50	1.92	1.98
TX05A001188	13.5	69.9	0.40	11.9	0.664	80.91	-0.26	20.53	-11.82	1.42	2.15
TX07A001505	11.9	70.8	0.41	10.6	0.672	81.63	-0.58	21.39	-12.37	0.90	4.91
TX03A0563-07AZHR247	13.6	69.7	0.44	12.1	0.632	80.89	0.04	19.02	-14.45	1.04	4.69
TX07A001118	12.9	71.3	0.47	11.2	0.229	79.71	-0.96	26.15	-10.10	1.34	2.03
TX07A001305	12.8	67.4	0.44	11.1	0.621	80.47	-0.29	20.83	-11.36	1.56	1.80
TX06V7266	12.8	69.6	0.42	11.1	0.732	80.73	-0.69	21.27	-11.39	0.68	3.51
CO050322	11.7	68.3	0.39	10.0	0.636	81.65	-0.84	21.61	-9.72	0.18	4.39
CO05W111	12.3	69.7	0.40	10.6	0.705	82.46	-0.79	20.59	-10.24	0.43	4.48

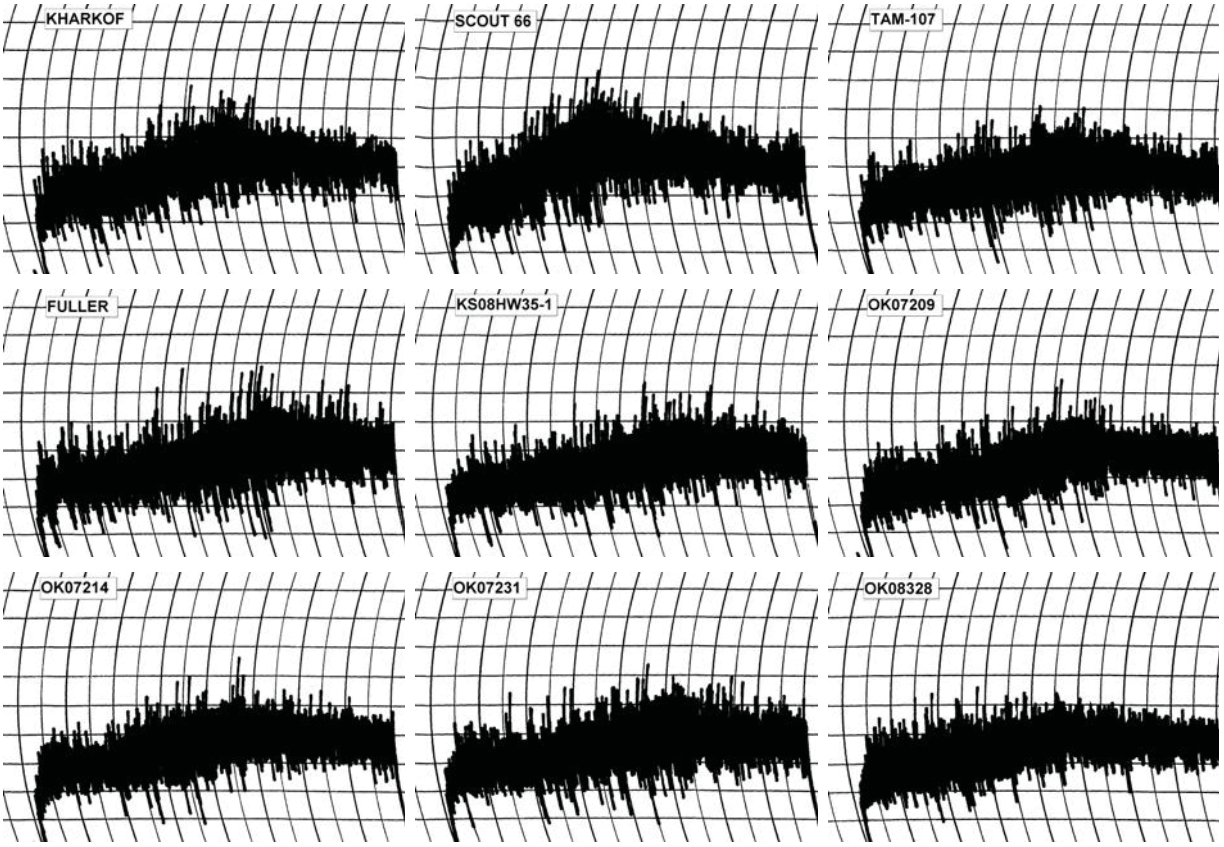
2011 SRPN Intraregional Production Zone

North Central Plains

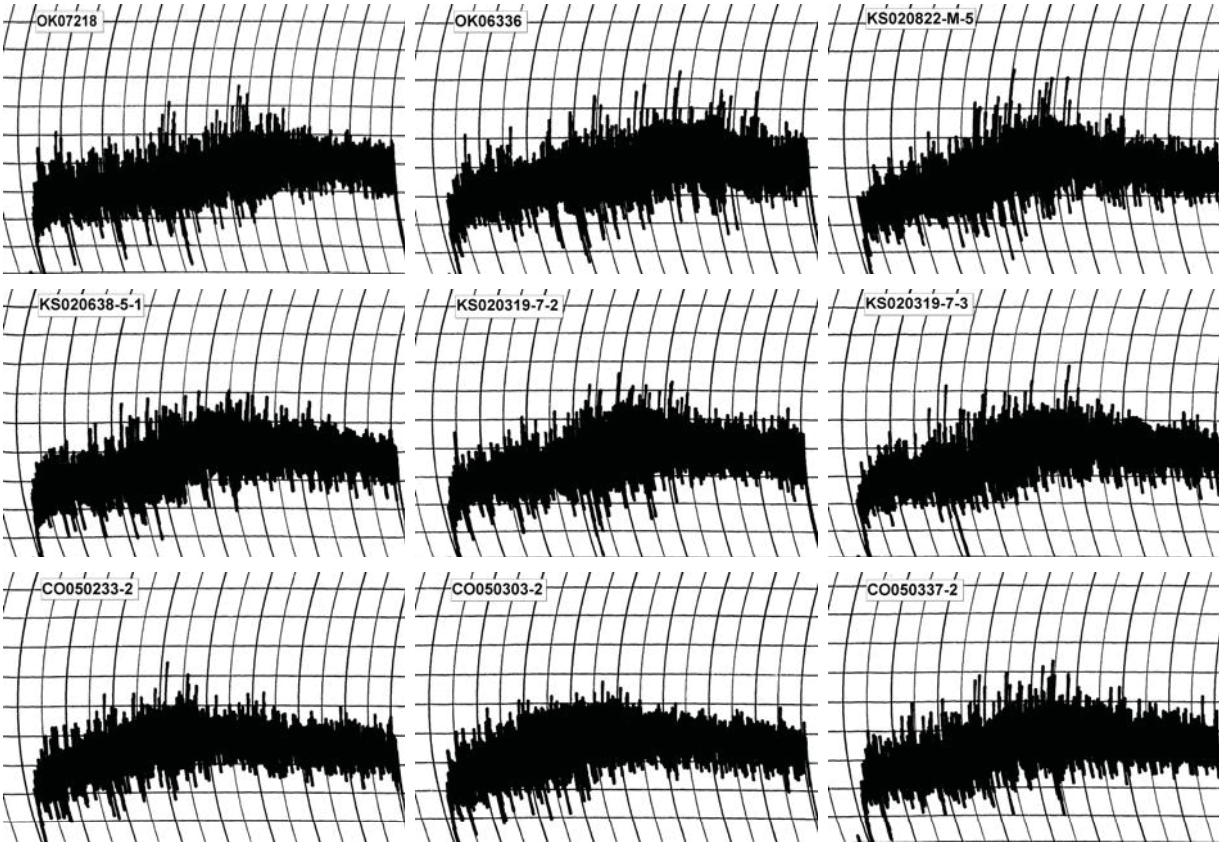
		Mixograph			
	Flour Protein	Absorption	As-Is	Corrected	Tolerance
Line	(%)	(%)	(min)	(min)	
Kharkof	12.6	60.4	4.50	4.50	3
Scout 66	12.3	63.4	3.63	3.63	3
TAM-107	11.5	62.1	4.88	4.58	4
Fuller	11.5	62.1	5.13	4.82	4
Clara CL (KS08HW35-1)	11.2	61.6	5.38	4.84	4
Iba (OK07209)	10.6	60.7	4.88	4.08	4
Gallagher (OK07214)	11.4	61.1	4.38	4.09	3
OK07231	11.4	61.9	5.38	4.99	5
OK08328	11.0	59.9	4.38	3.87	2
OK07218	11.3	60.2	5.75	5.25	3
OK06336	12.2	63.3	5.50	5.50	3
KS020822-M-5	12.0	63.0	4.50	4.50	4
KS020638-5-1	11.5	61.1	4.38	4.12	3
KS020319-7-2	11.1	61.5	4.38	3.90	4
KS020319-7-3	11.3	61.7	4.38	4.00	4
CO050233-2	11.6	61.2	3.63	3.44	2
Denali (CO050303-2)	10.9	61.1	3.75	3.24	2
CO050337-2	10.5	60.4	4.50	3.69	4
Brawl CL Plus (CO06052)	12.3	62.4	4.63	4.63	4
Byrd (CO06424)	10.9	61.1	7.75	6.69	4
NE06430	11.1	60.4	6.75	6.02	4
NE07444	11.1	60.4	6.50	5.78	4
NE06607	11.5	62.1	5.38	5.05	4
NI08708	11.6	62.2	5.00	4.74	4
TX06A001281	11.8	62.5	4.13	4.01	4
TX05V7259	11.1	61.5	7.38	6.62	4
TX05A001188	11.9	62.8	4.75	4.71	4
TX07A001505	10.6	60.5	9.38	7.78	5
TX03A0563-07AZHR247	12.1	63.1	4.13	4.13	4
TX07A001118	11.2	61.6	5.63	5.10	3
TX07A001305	11.1	61.4	5.00	4.45	4
TX06V7266	11.1	61.5	3.25	2.91	3
CO050322	10.0	59.7	4.38	3.35	4
CO05W111	10.6	60.7	3.88	3.25	4

2011 SRPN Intraregional Production Zone

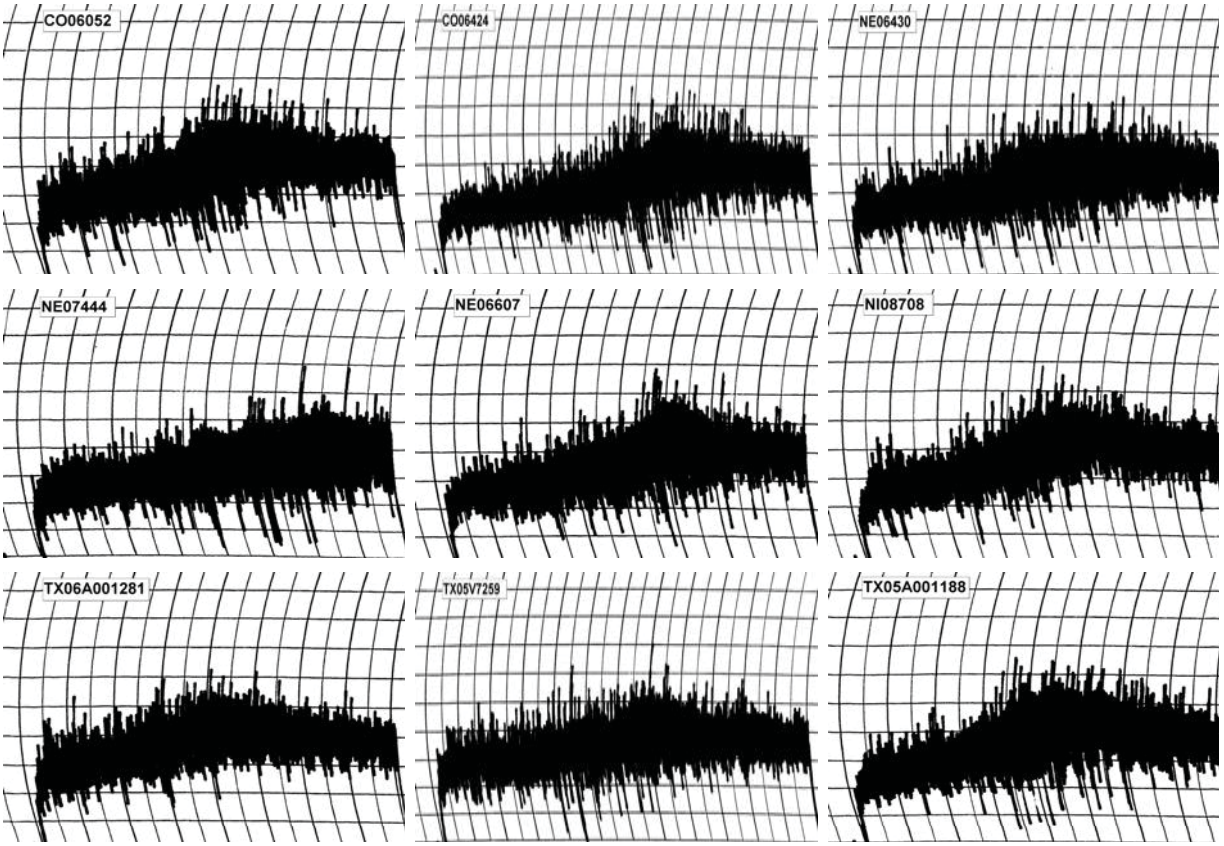
North Central Plains



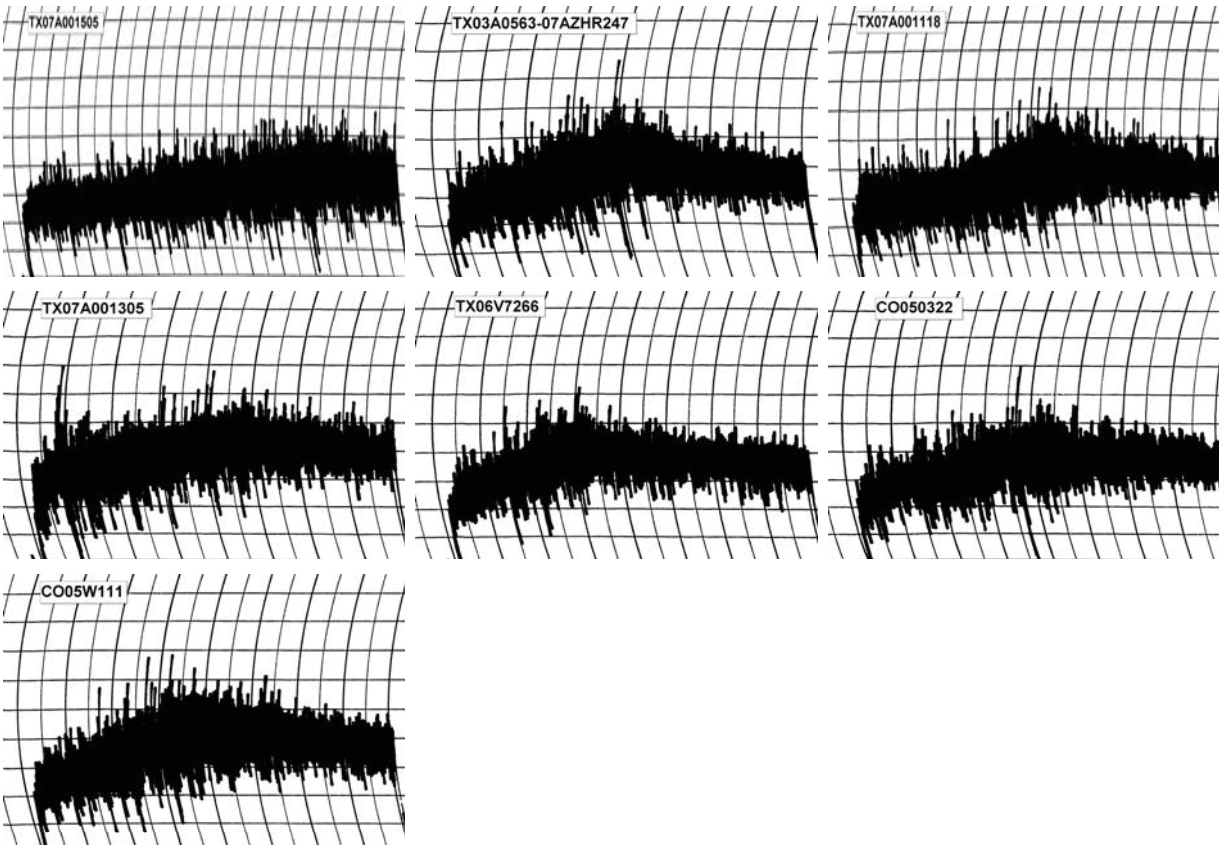
2011 SRPN Intraregional Production Zone
North Central Plains



2011 SRPN Intraregional Production Zone
North Central Plains



2011 SRPN Intraregional Production Zone
North Central Plains



2011 SRPN Intraregional Production Zone

North Central Plains

	RVA							
Line	Stirring Number (RVU)	Peak Viscosity (RVU)	Trough Viscosity (RVU)	Breakdown (RVU)	Final Viscosity (RVU)	Set back (RVU)	Peak Time (min)	Pasting Temp (Deg. C)
Kharkof	158.42	245.33	166.75	78.58	283.42	116.67	6.40	86.50
Scout 66	142.83	208.33	131.17	77.17	245.75	114.58	6.13	67.70
TAM-107	148.33	265.58	185.42	80.17	312.42	127.00	6.47	68.60
Fuller	122.83	199.42	132.08	67.33	243.00	110.92	6.27	69.40
Clara CL (KS08HW35-1)	147.42	270.50	163.50	107.00	270.17	106.67	6.33	67.70
Iba (OK07209)	118.33	249.67	163.25	86.42	291.67	128.42	6.27	69.35
Gallagher (OK07214)	134.08	214.00	144.42	69.58	262.92	118.50	6.33	67.80
OK07231	119.50	219.75	145.33	74.42	266.33	121.00	6.20	66.05
OK08328	121.33	273.33	158.25	115.08	269.92	111.67	6.27	68.65
OK07218	134.50	223.25	152.42	70.83	279.50	127.08	6.27	67.70
OK06336	144.92	257.25	171.25	86.00	288.83	117.58	6.47	67.80
KS020822-M-5	152.42	247.25	168.83	78.42	299.92	131.08	6.33	86.45
KS020638-5-1	145.17	273.92	174.17	99.75	281.58	107.42	6.47	68.60
KS020319-7-2	156.58	279.00	166.08	112.92	272.83	106.75	6.33	67.80
KS020319-7-3	153.25	276.00	173.42	102.58	279.42	106.00	6.33	67.80
CO050233-2	141.83	256.42	180.42	76.00	305.08	124.67	6.47	86.45
Denali (CO050303-2)	161.00	232.17	159.75	72.42	285.33	125.58	6.33	86.45
CO050337-2	120.17	228.50	146.17	82.33	273.42	127.25	6.13	69.50
Brawl CL Plus (CO06052)	144.75	238.17	159.83	78.33	285.67	125.83	6.33	68.65
Byrd (CO06424)	122.75	256.33	157.67	98.67	291.00	133.33	6.13	67.80
NE06430	134.92	249.17	154.83	94.33	273.08	118.25	6.27	68.60
NE07444	126.33	212.58	131.83	80.75	250.75	118.92	6.07	67.70
NE06607	112.83	252.75	151.75	101.00	252.75	101.00	6.27	67.70
NI08708	130.83	222.08	144.58	77.50	270.00	125.42	6.13	67.75
TX06A001281	121.50	229.83	125.25	104.58	218.25	93.00	6.20	69.40
TX05V7259	157.58	235.83	168.75	67.08	289.75	121.00	6.47	86.40
TX05A001188	142.83	241.42	157.00	84.42	277.00	120.00	6.33	69.40
TX07A001505	144.92	249.92	163.42	86.50	297.67	134.25	6.20	84.90
TX03A0563-07AZHR247	144.83	208.25	148.67	59.58	275.58	126.92	6.20	86.45
TX07A001118	125.58	249.17	153.83	95.33	278.92	125.08	6.20	67.70
TX07A001305	127.50	245.00	171.58	73.42	294.25	122.67	6.47	68.60
TX06V7266	144.33	240.08	159.75	80.33	287.75	128.00	6.27	69.55
CO050322	118.33	231.50	149.00	82.50	276.42	127.42	6.20	69.40
CO05W111	136.92	219.75	136.08	83.67	251.83	115.75	6.13	69.30

2011 SRPN Intraregional Production Zone

North Central Plains

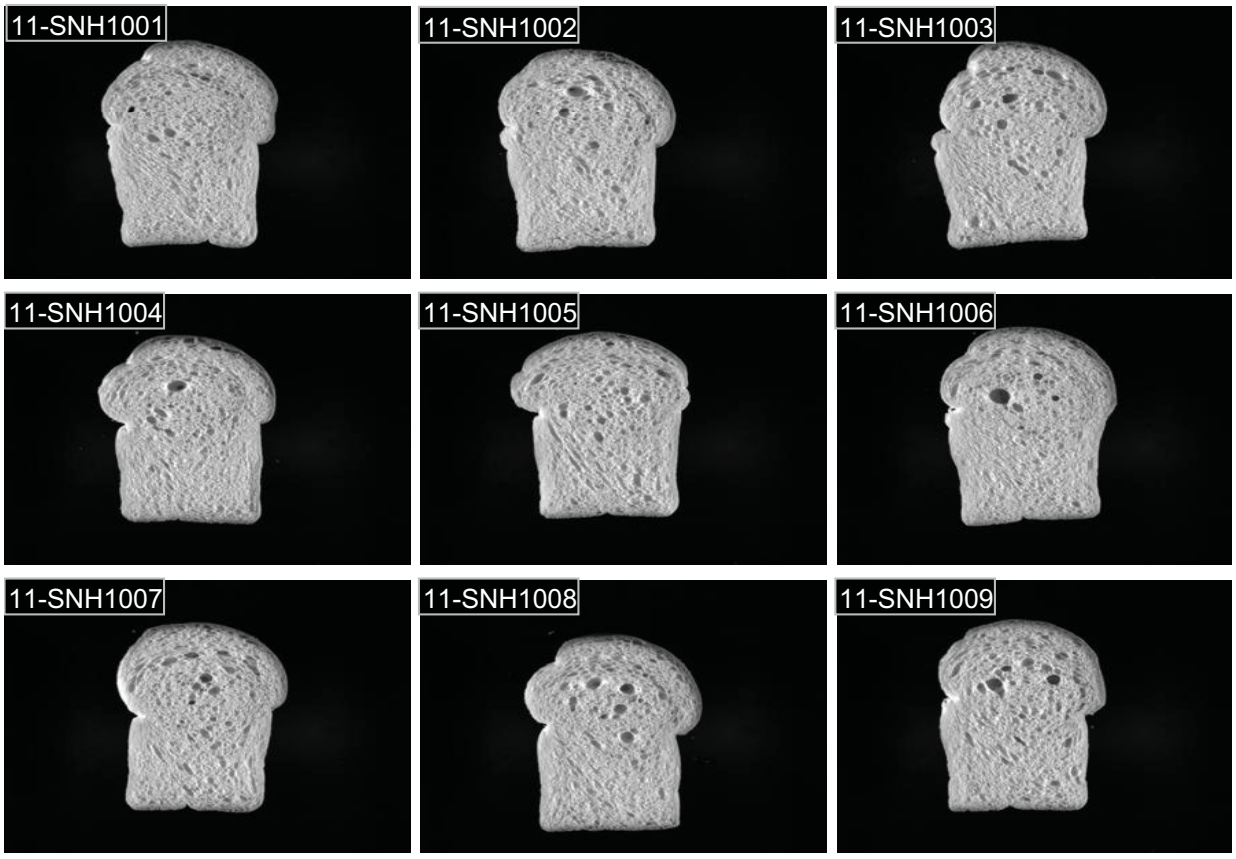
	Flour		Mix Time		Dough					
	Protein	Water Abs.	As-is	Corrected	Weight	Proof Height	Crumb Grain	As-Rec'd.	Specific Volume	Loaf Volume Potential
Line	(%)	(%)	(min)	(min)	(g)	(cm)		(cc)	(cc/g)	(cc/%)
Kharkof	12.6	60.7	5.13	5.13	169.8	7.3	4.0	910	6.2	64
Scout 66	12.3	62.9	4.25	4.25	172.4	7.3	3.5	925	6.1	67
TAM-107	11.5	62.2	5.75	5.40	171.7	7.2	3.0	930	6.3	74
Fuller	11.5	62.6	6.00	5.64	171.7	7.5	3.0	940	6.4	75
Clara CL (KS08HW35-1)	11.2	61.9	6.25	5.62	171.2	7.4	3.2	875	5.8	70
Iba (OK07209)	10.6	60.9	5.13	4.29	170.2	6.8	4.2	835	5.6	69
Gallagher (OK07214)	11.4	60.6	5.25	4.90	169.7	6.7	3.0	850	5.8	65
OK07231	11.4	61.7	6.75	6.26	171.1	7.0	2.5	875	5.9	68
OK08328	11.0	58.5	4.25	3.75	167.5	6.1	1.8	745	5.1	55
OK07218	11.3	60.5	6.50	5.93	168.9	6.9	2.2	885	6.1	70
OK06336	12.2	62.7	5.50	5.50	172.5	6.8	2.0	900	6.0	65
KS020822-M-5	12.0	62.7	4.25	4.25	172.5	7.0	2.0	850	5.6	61
KS020638-5-1	11.5	60.9	4.25	4.00	170.4	6.9	2.0	865	5.8	66
KS020319-7-2	11.1	61.1	5.25	4.68	170.3	7.2	3.0	925	6.2	77
KS020319-7-3	11.3	60.9	5.88	5.37	170.1	7.0	2.8	910	6.1	73
CO050233-2	11.6	60.7	4.00	3.79	170.3	7.0	2.5	840	5.6	63
Denali (CO050303-2)	10.9	59.7	3.50	3.02	169.2	6.8	2.0	795	5.3	62
CO050337-2	10.5	60.7	4.88	4.01	169.7	7.1	3.0	865	5.8	74
Brawl CL Plus (CO06052)	12.3	62.4	4.75	4.75	171.5	7.2	4.0	940	6.3	69
Byrd (CO06424)	10.9	59.8	10.00	8.63	168.0	7.3	2.5	915	6.2	78
NE06430	11.1	59.8	7.25	6.47	168.5	6.4	3.0	825	5.6	64
NE07444	11.1	61.8	8.25	7.34	170.9	6.8	2.5	785	5.3	60
NE06607	11.5	61.8	6.88	6.46	171.1	7.0	3.0	870	5.9	67
NI08708	11.6	61.9	4.75	4.51	171.2	6.1	2.8	745	4.9	52
TX06A001281	11.8	61.6	4.13	4.01	171.7	6.4	2.0	835	5.6	61
TX05V7259	11.1	60.8	8.00	7.18	169.1	6.2	2.5	735	4.9	53
TX05A001188	11.9	61.8	5.50	5.45	171.3	6.9	3.0	860	5.8	63
TX07A001505	10.6	59.8	10.50	8.71	168.0	6.8	3.0	760	5.2	60
TX03A0563-07AZHR247	12.1	62.7	5.50	5.50	171.7	6.8	3.0	850	5.7	61
TX07A001118	11.2	61.6	8.38	7.59	170.5	7.0	3.5	850	5.8	67
TX07A001305	11.1	61.7	5.38	4.79	171.3	6.7	2.5	885	6.0	72
TX06V7266	11.1	59.7	4.00	3.59	169.1	6.7	2.5	795	5.3	60
CO050322	10.0	60.1	4.50	3.45	169.9	6.5	3.0	750	5.0	63
CO05W111	10.6	61.0	4.38	3.67	170.3	6.8	4.0	785	5.2	63

SRPN Sample ID List

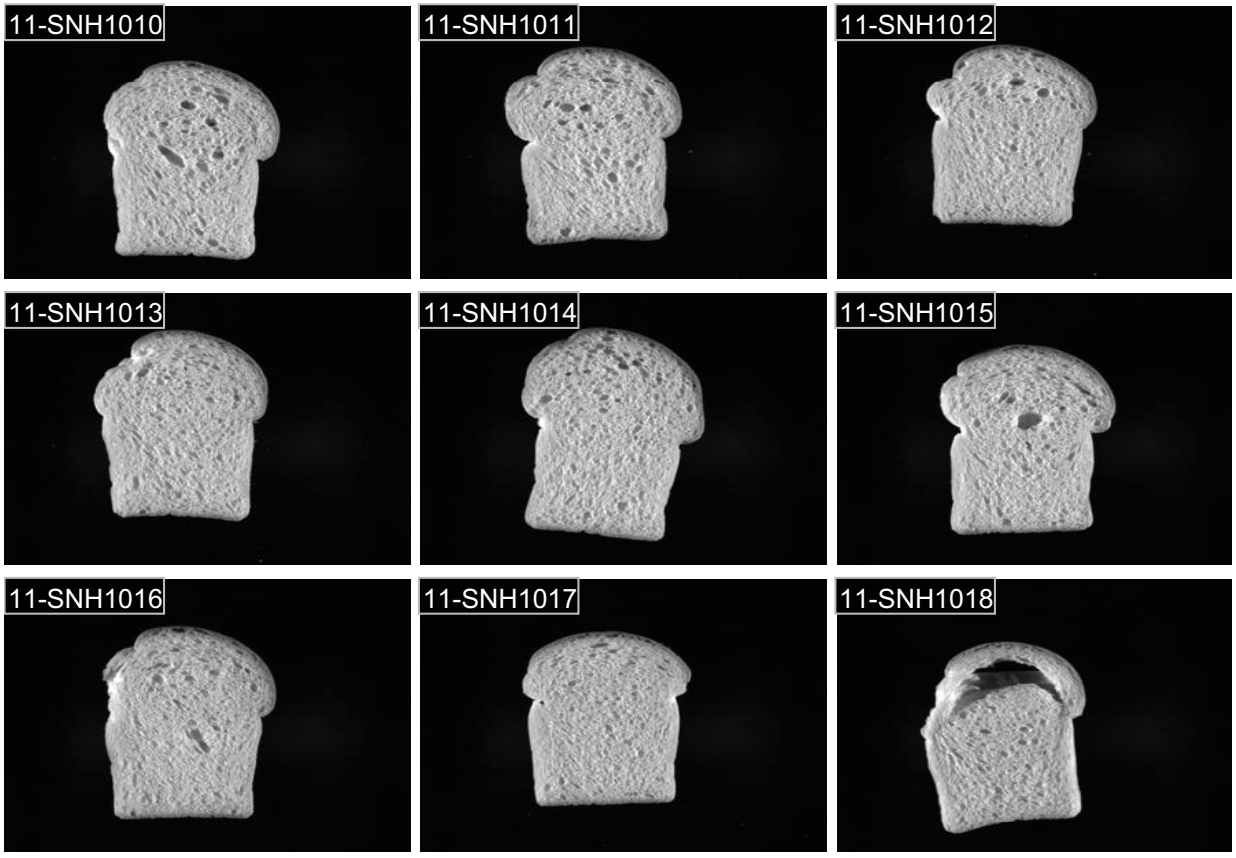
Entry	Breeder ID	HWWQL ID			
		North Central Plains	Northern High Plains	South Central Plains	Southern High Plains
1	**Kharkof**	11-SNC1001	11-SNH1001	11-SSC1001	11-SSH1001
2	**Scout 66**	11-SNC1002	11-SNH1002	11-SSC1002	11-SSH1002
3	**TAM-107**	11-SNC1003	11-SNH1003	11-SSC1003	11-SSH1003
4	**Fuller**	11-SNC1004	11-SNH1004	11-SSC1004	11-SSH1004
5	**Clara CL (KS08HW35-1)**	11-SNC1005	11-SNH1005	11-SSC1005	11-SSH1005
6	**Iba (OK07209)**	11-SNC1006	11-SNH1006	11-SSC1006	11-SSH1006
7	**Gallagher (OK07214)**	11-SNC1007	11-SNH1007	11-SSC1007	11-SSH1007
8	**OK07231**	11-SNC1008	11-SNH1008	11-SSC1008	11-SSH1008
9	**OK08328**	11-SNC1009	11-SNH1009	11-SSC1009	11-SSH1009
10	**OK07218**	11-SNC1010	11-SNH1010	11-SSC1010	11-SSH1010
11	**OK06336**	11-SNC1011	11-SNH1011	11-SSC1011	11-SSH1011
12	**KS020822-M-5**	11-SNC1012	11-SNH1012	11-SSC1012	11-SSH1012
13	**KS020638-5-1**	11-SNC1013	11-SNH1013	11-SSC1013	11-SSH1013
14	**KS020319-7-2**	11-SNC1014	11-SNH1014	11-SSC1014	11-SSH1014
15	**KS020319-7-3**	11-SNC1015	11-SNH1015	11-SSC1015	11-SSH1015
16	**CO050233-2**	11-SNC1016	11-SNH1016	11-SSC1016	11-SSH1016
17	**Denali (CO050303-2)**	11-SNC1017	11-SNH1017	11-SSC1017	11-SSH1017
18	**CO050337-2**	11-SNC1018	11-SNH1018	11-SSC1018	11-SSH1018
19	**Brawl CL Plus (CO06052)**	11-SNC1019	11-SNH1019	11-SSC1019	11-SSH1019
20	**Byrd (CO06424)**	11-SNC1020	11-SNH1020	11-SSC1020	11-SSH1020
21	**NE06430**	11-SNC1025	11-SNH1025	11-SSC1025	11-SSH1025
22	**NE07444**	11-SNC1026	10-SNH1026	11-SSC1026	11-SSH1026
23	**NE06607**	11-SNC1027	10-SNH1027	11-SSC1027	11-SSH1027
24	**NI08708**	11-SNC1028	10-SNH1028	11-SSC1028	11-SSH1028
25	**TX06A001281**	11-SNC1029	10-SNH1029	11-SSC1029	11-SSH1029
26	**TX05V7259**	11-SNC1030	10-SNH1030	11-SSC1030	11-SSH1030
27	**TX05A001188**	11-SNC1031	10-SNH1031	11-SSC1031	11-SSH1031
28	**TX07A001505**	11-SNC1032	10-SNH1032	11-SSC1032	11-SSH1032
29	**TX03A0563-07AZHR247**	11-SNC1033	10-SNH1033	11-SSC1033	11-SSH1033
30	**TX07A001118**	11-SNC1034	10-SNH1034	11-SSC1034	11-SSH1034
31	**TX07A001305**	11-SNC1035	10-SNH1035	11-SSC1035	11-SSH1035
32	**TX06V7266**	11-SNC1036	10-SNH1036	11-SSC1036	11-SSH1036
33	**CO050322**	11-SNC1037	10-SNH1037	11-SSC1037	11-SSH1037
34	**CO05W111**	11-SNC1038	10-SNH1038	11-SSC1038	11-SSH1038

2011 SRPN Intraregional Production Zone

Northern High Plains

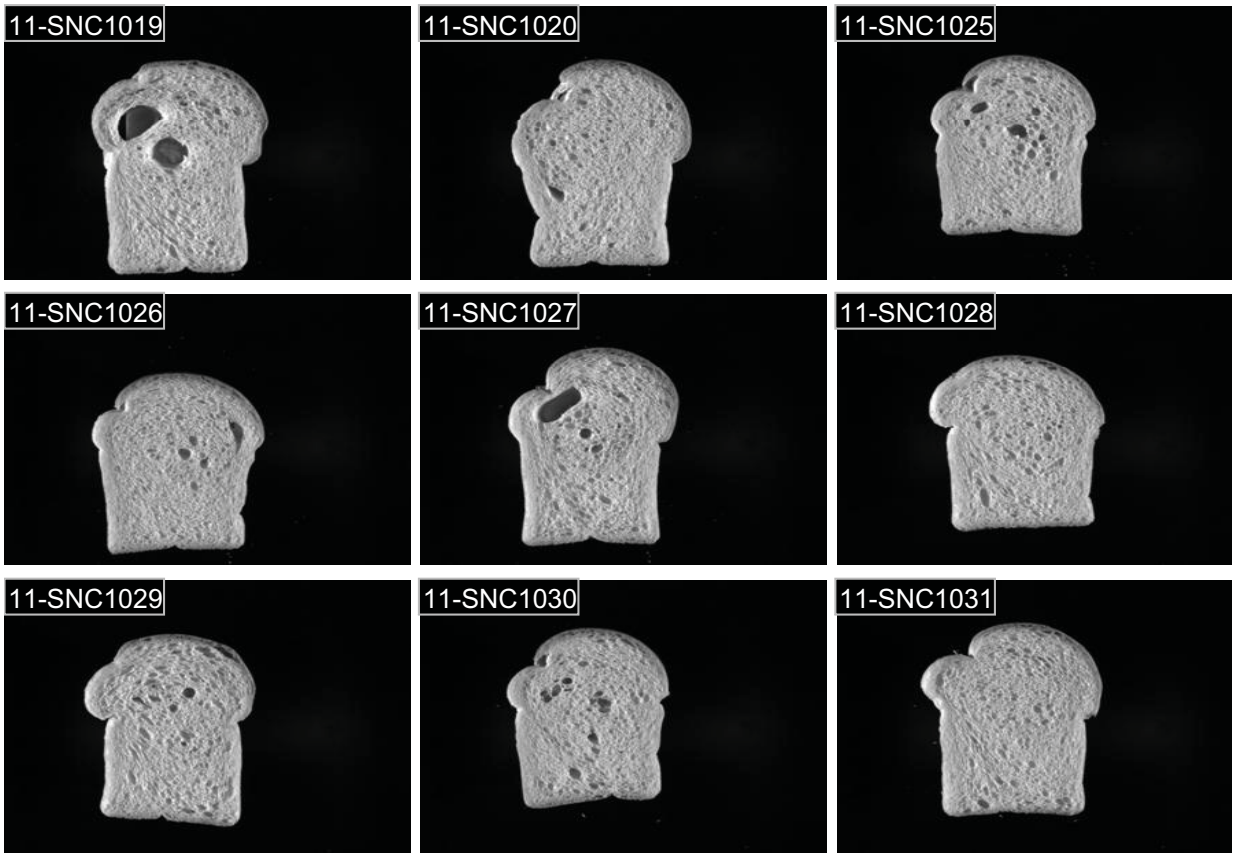


2011 SRPN Intraregional Production Zone
Northern High Plains

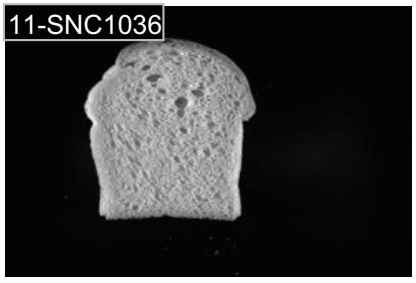


2011 SRPN Intraregional Production Zone

North Central Plains



2011 SRPN Intraregional Production Zone
North Central Plains



Hard Winter Wheat Quality Report

2011 SRPN-NHP

1 - Test weight	10	11 - Flour protein	8
2 - SKCS kernel weight	8	12 - Bake absorption	15
3 - Kernel weight SD	8	13 - Mixograph absorption	5
4 - SKCS kernel diameter	8	14 - Bake mix time	10
5 - Kernel diameter SD	8	15 - Mixograph mix time	5
6 - SKCS hardness	10	16 - Mixograph tolerance	5
7 - Hardness SD	8	17 - Dough weight	
8 - Flour yield	30	18 - Proof height	2
9 - Flour ash	10	19 - Loaf volume	20
10 - Milling score		20 - Volume regression	5
		21 - Crumb grain	25

ID	Milling Score	Rating	%	Baking Score	Rating	%	1RS	Trait Deficiencies
Kharkof	42.6	Very Poor	68.2	42.1	Average	78.9		4,6,8,10,
Scout 66	57.4	Good	91.8	40.4	Average	75.7		
TAM 107	53.1	Very Poor	84.9	36.8	Poor	68.9	1AL	3,5,
Fuller	56.1	Average	89.7	39.0	Poor	73.0		
Clara CL	57.6	Good	92.1	43.4	Good	81.3		10,18,
Iba	58.8	Very Good	94.1	48.1	Very Good	90.2		12,13,16,
Gallagher	55.4	Poor	88.5	38.1	Poor	71.4		9,16,21,
OK07231	53.8	Poor	86.1	49.0	Very Good	91.7		1,
OK08328	51.7	Very Poor	82.7	31.3	Very Poor	58.7		16,
OK07218	58.3	Good	93.3	50.6	Very Good	94.7		
OK06336	47.2	Very Poor	75.5	40.7	Average	76.3		1,3,5,8,9,10,
KS020822-M-5	55.7	Poor	89.1	45.1	Good	84.4		2,4,20,
KS020638-5-1	60.4	Very Good	96.6	39.8	Average	74.6		16,
KS020319-7-2	57.4	Good	91.7	40.2	Average	75.2		16,
KS020319-7-3	53.8	Poor	86.0	46.9	Good	87.9		16,
CO050233-2	57.2	Good	91.5	38.5	Average	72.2		16,
Denali	56.9	Average	91.0	25.0	Very Poor	46.9		11,16,19,20,
CO050337-2	53.6	Poor	85.8	27.5	Very Poor	51.5		11,16,19,
Brawl CL Plus	62.1	Very Good	99.2	42.7	Average	80.0		
Byrd	61.3	Very Good	97.9	25.1	Very Poor	47.0		11,12,13,14,15,17,
NE06430	56.2	Average	89.9	31.2	Very Poor	58.4		15,
NE07444	52.2	Very Poor	83.5	33.0	Very Poor	61.8		1,15,
NE06607	56.6	Average	90.5	39.9	Poor	74.7		1,15,
NI08708	53.2	Very Poor	85.1	53.4	Very Good	100.0		5,
TX06A001281	53.9	Poor	86.1	34.9	Poor	65.4		16,21,
TX05V7259	54.6	Poor	87.3	48.8	Very Good	91.3		15,
TX05A001188	58.7	Good	93.8	45.4	Good	85.1		
TX07A001505	56.4	Average	90.2	38.7	Poor	72.4		14,15,
TX03A0563-07AZHR247	62.5	Very Good	100.0	46.8	Good	87.7		16,
TX07A001118	61.4	Very Good	98.1	46.0	Good	86.2		2,9,10,

Quality scores and ratings are calculated directly from the relative trait weightings (printed at the top of the page) and are applicable only to the nursery selected.

Hard Winter Wheat Quality Report

2011 SRPN-NHP

1 - Test weight	10	11 - Flour protein	8
2 - SKCS kernel weight	8	12 - Bake absorption	15
3 - Kernel weight SD	8	13 - Mixograph absorption	5
4 - SKCS kernel diameter	8	14 - Bake mix time	10
5 - Kernel diameter SD	8	15 - Mixograph mix time	5
6 - SKCS hardness	10	16 - Mixograph tolerance	5
7 - Hardness SD	8	17 - Dough weight	
8 - Flour yield	30	18 - Proof height	2
9 - Flour ash	10	19 - Loaf volume	20
10 - Milling score		20 - Volume regression	5
		21 - Crumb grain	25

ID	Milling Score	Rating	%	Baking Score	Rating	%	1RS	Trait Deficiencies
TX07A001305	56.5	Average	90.4	48.9	Very Good	91.6		
TX06V7266	56.2	Average	89.8	21.5	Very Poor	40.3		12,16,17,
CO050322	52.7	Very Poor	84.2	46.1	Good	86.3		11,16,
CO05W111	57.0	Good	91.1	32.5	Poor	60.9		2,4,12,16,

2011 SRPN Intraregional Production Zone

Northern High Plains

		SKCS Average Kernel						Hardness			
		Moisture		Weight		Diameter		SKCS		Class	Distribution
LINE	Wt/Bu (lb)	(%)	(sd)	(mg)	(sd)	(mm)	(sd)		(sd)		
Kharkof	58.9	9.6	1.0	27.0	6.7	2.46	0.26	40	21	MIXED	41--27--15--17--03
Scout 66	59.8	11.1	0.7	32.1	8.8	2.59	0.30	51	18	MIXED	16--21--31--32--03
TAM-107	59.3	10.9	0.6	33.8	9.1	2.64	0.35	59	17	HARD	07--14--28--51--02
Fuller	59.5	11.2	0.6	30.1	8.0	2.65	0.30	58	14	HARD	05--14--36--45--01
Clara CL (KS08HW35-1)	60.3	11.0	0.6	30.4	7.2	2.61	0.28	64	16	HARD	03--12--21--64--01
Iba (OK07209)	60.3	10.9	0.6	31.0	8.3	2.64	0.30	51	18	MIXED	15--24--31--30--03
Gallagher (OK07214)	58.9	11.1	0.6	30.5	8.6	2.63	0.32	70	16	HARD	00--08--18--74--01
OK07231	57.8	10.8	0.6	30.0	8.3	2.64	0.33	70	18	HARD	02--08--18--72--01
OK08328	58.5	11.0	0.6	28.7	8.1	2.58	0.31	60	17	HARD	06--12--30--52--02
OK07218	59.9	11.0	0.5	33.4	8.5	2.70	0.33	56	15	HARD	07--20--30--43--02
OK06336	57.3	11.4	0.6	31.3	10.0	2.62	0.37	70	16	HARD	02--07--13--78--01
KS020822-M-5	58.9	10.6	0.7	24.9	6.6	2.46	0.27	62	17	HARD	05--10--30--55--01
KS020638-5-1	59.6	10.6	0.7	30.3	7.9	2.67	0.30	62	16	HARD	04--10--29--57--01
KS020319-7-2	59.4	10.3	0.7	30.3	7.3	2.57	0.26	57	16	HARD	06--19--28--47--02
KS020319-7-3	59.5	10.1	0.7	29.5	7.9	2.56	0.33	57	17	HARD	08--14--32--46--02
CO050233-2	58.6	10.5	0.7	30.5	7.7	2.65	0.33	59	15	HARD	04--16--29--51--01
Denali (CO050303-2)	59.8	10.8	0.6	30.6	8.2	2.57	0.33	53	17	HARD	09--28--26--37--02
CO050337-2	59.0	10.7	0.7	30.9	8.9	2.58	0.33	53	17	MIXED	14--19--32--35--03
Brawl CL Plus (CO06052)	59.9	10.6	0.6	31.5	7.6	2.69	0.27	61	15	HARD	05--13--26--56--01
Byrd (CO06424)	59.6	11.0	0.7	29.3	8.0	2.53	0.30	53	18	MIXED	13--24--29--34--03
NE06430	58.7	10.3	0.8	30.0	7.9	2.58	0.33	51	17	MIXED	13--25--29--33--03
NE07444	57.7	10.2	0.9	28.7	8.3	2.54	0.30	61	17	HARD	05--13--28--54--01
NE06607	57.3	10.4	0.8	29.9	7.8	2.58	0.31	52	17	MIXED	11--26--30--33--03
NI08708	57.9	8.7	1.0	31.9	8.7	2.65	0.36	55	16	HARD	07--24--31--38--02
TX06A001281	58.8	10.8	0.7	28.6	8.1	2.56	0.33	64	16	HARD	03--09--20--68--01
TX05V7259	59.4	10.4	0.7	29.4	7.5	2.63	0.32	64	17	HARD	04--13--20--63--01
TX05A001188	59.1	10.4	0.8	29.6	7.5	2.58	0.28	56	16	HARD	06--24--28--42--02
TX07A001505	59.9	10.2	0.9	28.2	8.1	2.52	0.31	61	17	HARD	06--13--25--56--02
TX03A0563-07AZHR247	60.6	9.9	0.9	27.8	6.9	2.55	0.28	60	15	HARD	04--11--32--53--01
TX07A001118	61.1	10.9	0.6	26.2	7.8	2.53	0.31	73	16	HARD	01--04--13--82--01
TX07A001305	59.5	10.4	0.7	30.7	8.5	2.67	0.35	63	16	HARD	03--13--23--61--01
TX06V7266	59.1	10.1	0.7	27.6	7.3	2.54	0.30	61	17	HARD	05--14--26--55--01
CO050322	58.7	10.1	0.9	29.9	8.1	2.56	0.34	51	18	MIXED	16--21--30--33--03
CO05W111	59.3	10.2	0.9	25.7	6.9	2.43	0.29	62	16	HARD	04--10--26--60--01

2011 SRPN Intraregional Production Zone

Northern High Plains

	Wheat		Flour			Noodle Color					
LINE	Protein (%)	Milling Yield (%)	Ash (%)	Protein (%)	PPO	L @ 0	a @ 0	b @ 0	Delta L 24 hrs	Delta a 24 hrs	Delta b 24 hrs
Kharkof	14.8	64.6	0.37	12.9	0.599	84.15	-1.17	19.22	-13.83	2.30	2.86
Scout 66	13.6	70.8	0.36	12.0	0.673	82.13	-0.49	20.37	-11.81	1.32	1.25
TAM-107	13.5	67.5	0.37	11.7	0.606	79.00	-1.10	24.75	-9.75	2.05	-0.84
Fuller	13.9	67.8	0.37	12.3	0.728	80.92	-1.13	22.04	-12.94	1.65	-0.01
Clara CL (KS08HW35-1)	13.5	68.1	0.39	11.6	0.706	81.96	-1.55	23.14	-11.70	1.48	1.96
Iba (OK07209)	12.4	70.7	0.34	11.0	0.607	82.07	-1.80	23.13	-10.77	1.32	3.24
Gallagher (OK07214)	13.1	68.6	0.43	11.8	0.190	81.62	-1.72	25.61	-9.61	0.90	2.59
OK07231	13.2	68.7	0.41	11.7	0.177	81.57	-0.99	23.02	-8.59	0.87	3.80
OK08328	12.2	67.6	0.39	11.2	0.581	81.07	-1.01	22.97	-9.91	0.53	2.84
OK07218	13.0	69.5	0.39	12.1	0.575	80.76	-1.47	25.29	-13.28	1.22	0.50
OK06336	13.9	66.2	0.44	12.4	0.600	81.26	-1.43	24.34	-12.94	1.61	1.85
KS020822-M-5	14.2	68.8	0.36	12.8	0.677	80.81	-1.13	22.77	-13.35	1.52	1.77
KS020638-5-1	13.8	70.3	0.37	12.2	0.755	81.35	-1.13	22.59	-12.88	1.27	1.38
KS020319-7-2	13.5	68.9	0.39	11.9	0.618	80.53	-1.29	23.61	-10.54	1.65	0.96
KS020319-7-3	13.4	68.6	0.40	12.0	0.603	80.25	-1.28	23.30	-9.51	1.79	-0.15
CO050233-2	12.8	69.5	0.39	11.7	0.778	80.23	-0.46	22.21	-10.49	1.87	0.00
Denali (CO050303-2)	12.1	70.5	0.39	10.7	0.603	81.05	-1.61	25.14	-10.60	1.97	0.88
CO050337-2	12.4	69.6	0.39	10.9	0.620	82.29	-1.67	24.66	-11.80	1.83	2.23
Brawl CL Plus (CO06052)	13.8	70.2	0.37	12.4	0.702	80.65	-1.24	23.28	-10.44	1.70	-0.25
Byrd (CO06424)	11.9	73.7	0.38	10.9	0.657	81.00	-1.36	24.03	-9.88	1.60	0.32
NE06430	13.0	69.9	0.34	11.4	0.710	81.40	-0.92	20.58	-10.47	1.37	2.40
NE07444	13.5	68.5	0.40	12.0	0.699	80.83	-1.23	23.90	-10.45	2.00	-0.09
NE06607	13.9	71.2	0.36	12.4	0.730	81.28	-0.73	20.21	-12.03	1.42	0.68
NI08708	14.1	68.6	0.36	12.4	0.839	81.21	-0.98	22.36	-9.99	1.71	-0.93
TX06A001281	13.6	68.1	0.39	12.1	0.732	79.79	-0.91	23.27	-12.06	1.50	1.51
TX05V7259	13.6	67.5	0.37	12.0	0.765	80.56	-0.89	21.94	-10.20	1.01	3.24
TX05A001188	14.1	69.7	0.34	12.3	0.739	82.27	-0.84	20.94	-12.13	1.08	2.09
TX07A001505	12.6	69.2	0.35	11.7	0.710	81.30	-1.45	25.42	-10.47	0.75	2.45
TX03A0563-07AZHR247	14.2	70.9	0.36	12.3	0.611	81.12	-0.63	21.03	-11.15	1.52	0.91
TX07A001118	13.0	71.4	0.43	11.4	0.190	81.56	-1.53	26.07	-10.41	1.74	2.10
TX07A001305	12.7	68.9	0.37	10.9	0.600	81.76	-0.77	20.96	-11.12	1.37	2.05
TX06V7266	13.2	69.4	0.37	11.7	0.734	81.21	-1.20	23.37	-12.41	-0.58	-0.59
CO050322	12.1	69.0	0.37	10.6	0.692	82.90	-1.43	22.47	-9.31	1.66	1.60
CO05W111	12.4	69.7	0.37	11.3	0.710	82.43	-1.41	23.78	-12.00	1.87	1.73

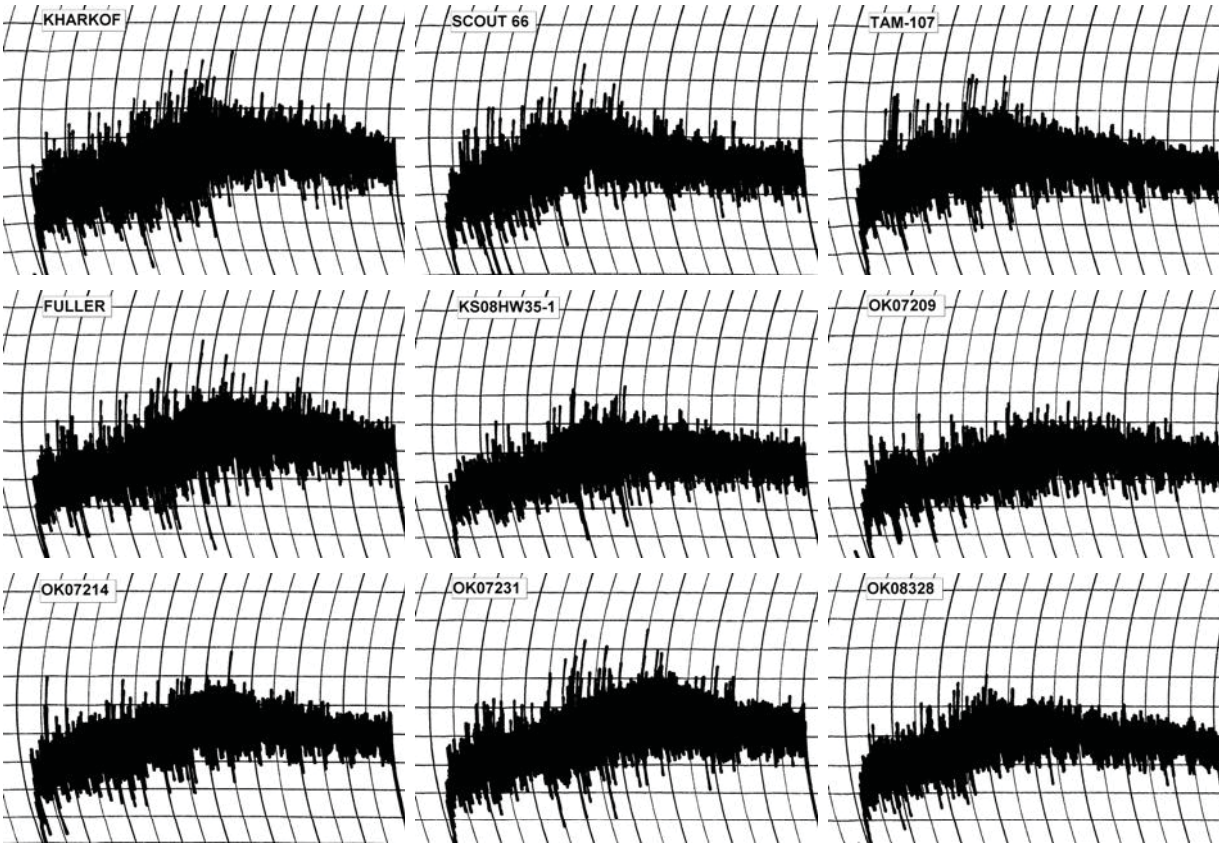
2011 SRPN Intraregional Production Zone

Northern High Plains

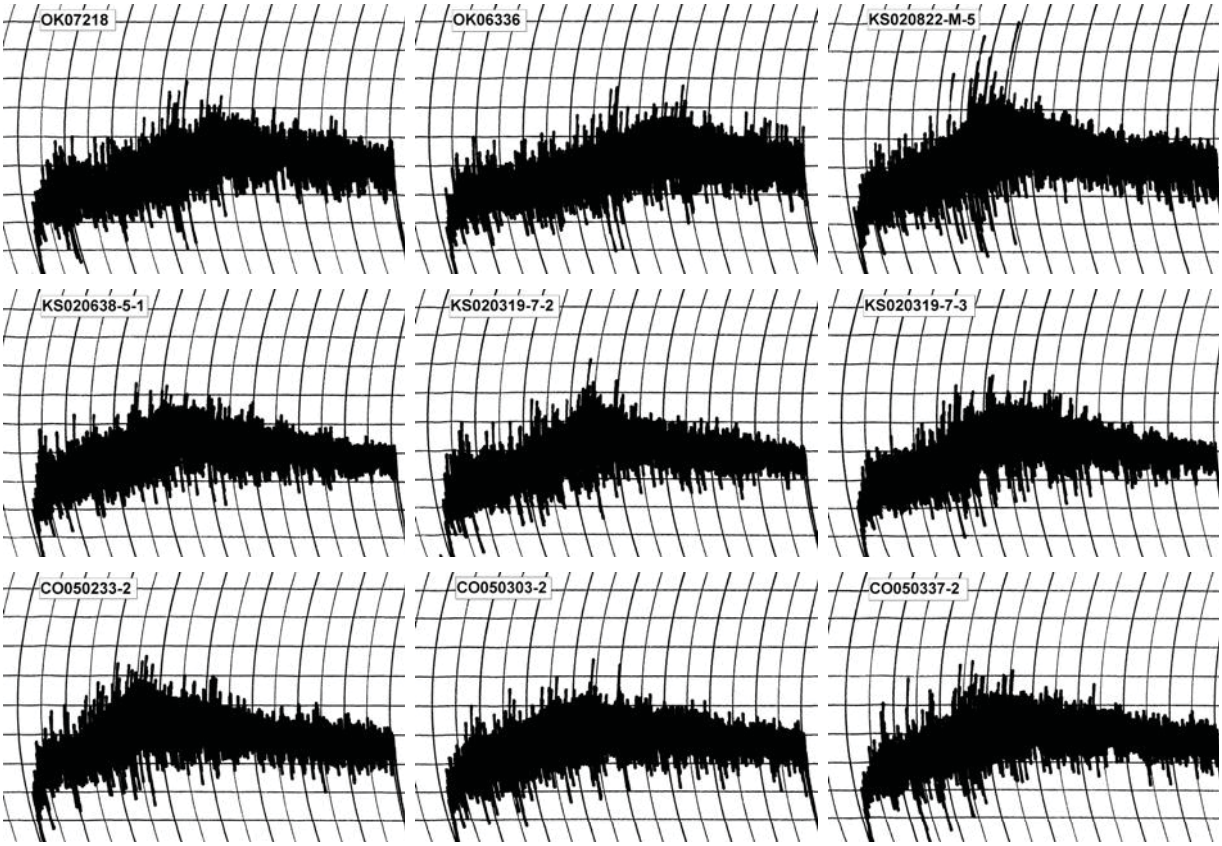
		Mixograph			
	Flour Protein	Absorption	As-Is	Corrected	Tolerance
Line	(%)	(%)	(min)	(min)	
Kharkof	12.9	61.9	4.13	4.13	3
Scout 66	12.0	62.5	3.50	3.50	3
TAM-107	11.7	61.5	3.38	3.28	3
Fuller	12.3	63.0	4.38	4.38	4
Clara CL (KS08HW35-1)	11.6	61.8	3.88	3.71	3
Iba (OK07209)	11.0	60.3	4.25	3.76	2
Gallagher (OK07214)	11.8	62.1	4.38	4.27	2
OK07231	11.7	63.5	4.88	4.72	4
OK08328	11.2	60.6	3.13	2.84	2
OK07218	12.1	64.3	4.18	4.18	3
OK06336	12.4	64.1	5.13	5.13	4
KS020822-M-5	12.8	63.8	3.38	3.38	3
KS020638-5-1	12.2	62.2	3.13	3.13	2
KS020319-7-2	11.9	62.7	3.50	3.45	1
KS020319-7-3	12.0	62.9	3.63	3.63	1
CO050233-2	11.7	62.4	2.50	2.40	2
Denali (CO050303-2)	10.7	60.9	3.50	2.97	2
CO050337-2	10.9	61.0	3.13	2.72	2
Brawl CL Plus (CO06052)	12.4	62.6	4.25	4.25	4
Byrd (CO06424)	10.9	59.1	6.38	5.51	4
NE06430	11.4	61.0	5.50	5.12	4
NE07444	12.0	61.9	5.38	5.36	4
NE06607	12.4	63.6	5.38	5.38	4
NI08708	12.4	62.6	4.50	4.50	4
TX06A001281	12.1	63.2	3.13	3.13	2
TX05V7259	12.0	62.9	5.75	5.74	5
TX05A001188	12.3	63.4	4.13	4.13	3
TX07A001505	11.7	61.3	7.50	7.19	4
TX03A0563-07AZHR247	12.3	63.5	3.00	3.00	2
TX07A001118	11.4	61.9	5.13	4.73	4
TX07A001305	10.9	61.1	3.13	2.72	3
TX06V7266	11.7	62.4	2.25	2.16	1
CO050322	10.6	60.5	3.88	3.23	2
CO05W111	11.3	61.8	3.38	3.09	2

2011 SRPN Intraregional Production Zone

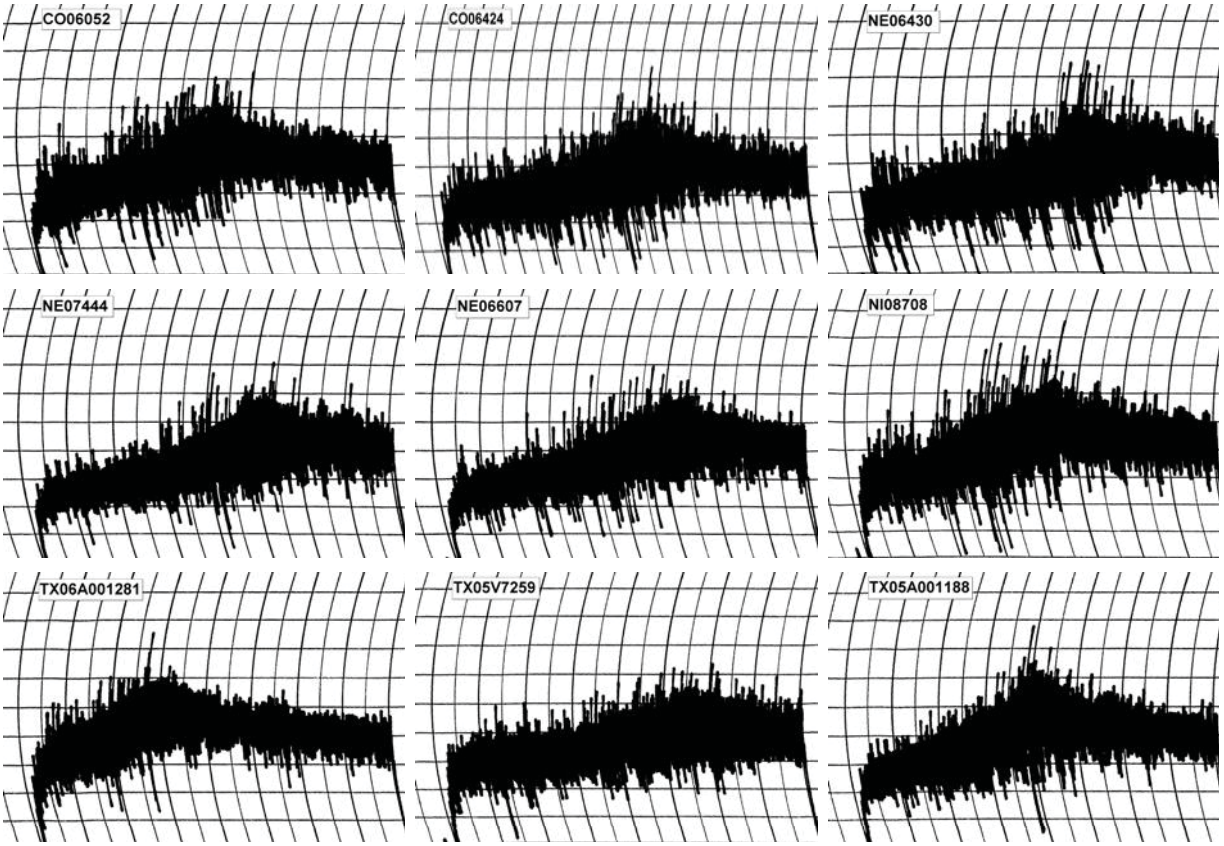
Northern High Plains



2011 SRPN Intraregional Production Zone
Northern High Plains

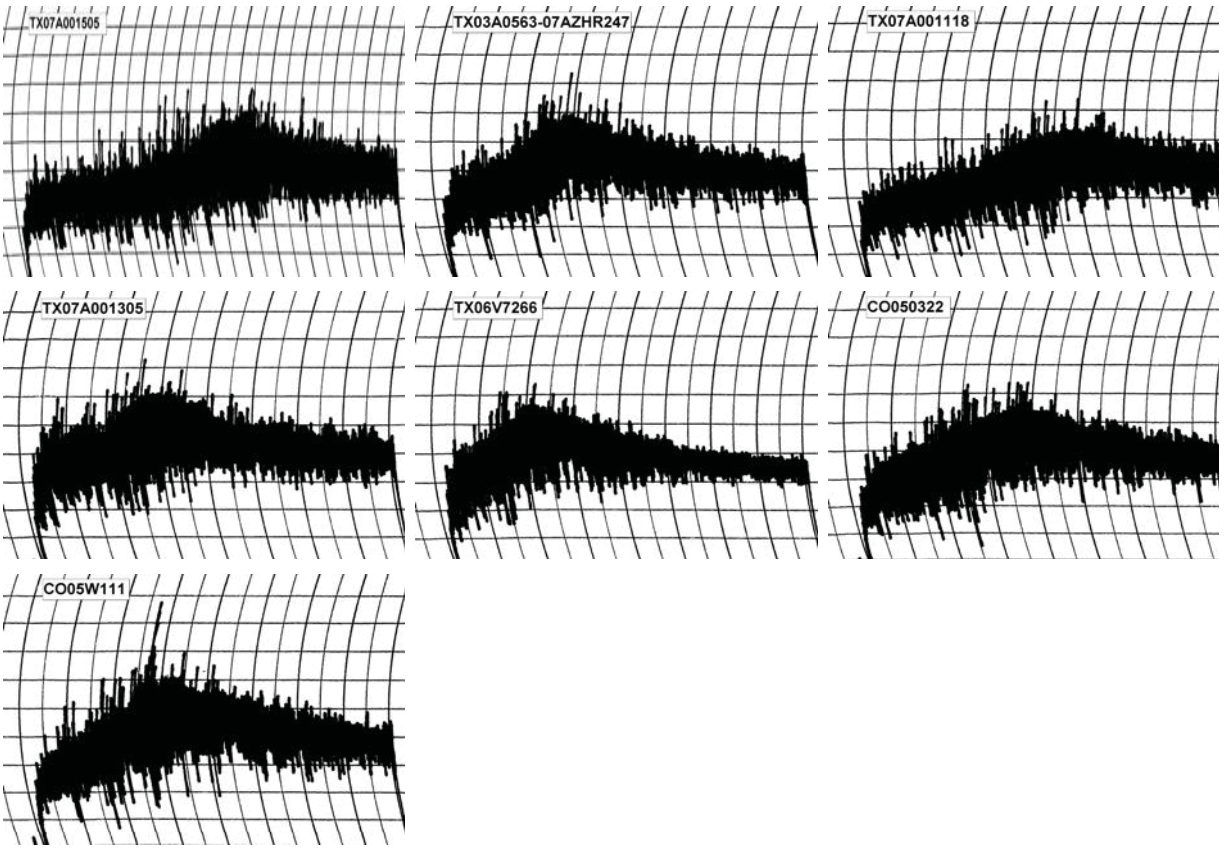


2011 SRPN Intraregional Production Zone
Northern High Plains



2011 SRPN Intraregional Production Zone

Northern High Plains



2011 SRPN Intraregional Production Zone

Northern High Plains

	RVA							
Line	Stirring Number (RVU)	Peak Viscosity (RVU)	Trough Viscosity (RVU)	Breakdown (RVU)	Final Viscosity (RVU)	Set back (RVU)	Peak Time (min)	Pasting Temp (Deg. C)
Kharkof	154.58	242.92	172.92	70.00	301.08	128.17	6.40	86.40
Scout 66	136.50	229.25	160.50	68.75	291.75	131.25	6.33	67.85
TAM-107	124.08	277.17	196.67	80.50	331.17	134.50	6.53	67.00
Fuller	140.42	241.25	181.83	59.42	311.00	129.17	6.40	67.70
Clara CL (KS08HW35-1)	133.33	293.67	186.25	107.42	303.75	117.50	6.40	67.75
Iba (OK07209)	124.50	248.17	173.58	74.58	312.33	138.75	6.33	69.45
Gallagher (OK07214)	134.00	208.75	156.25	52.50	282.50	126.25	6.33	66.15
OK07231	133.67	216.67	161.58	55.08	288.42	126.83	6.40	66.05
OK08328	126.08	289.08	177.25	111.83	300.67	123.42	6.40	68.60
OK07218	144.33	222.33	163.08	59.25	295.17	132.08	6.33	67.75
OK06336	148.75	257.83	178.17	79.67	307.83	129.67	6.47	67.80
KS020822-M-5	141.67	259.17	187.83	71.33	327.75	139.92	6.47	67.70
KS020638-5-1	124.67	283.33	187.67	95.67	306.00	118.33	6.53	67.70
KS020319-7-2	160.83	281.42	172.08	109.33	298.92	126.83	6.47	66.90
KS020319-7-3	138.75	287.33	190.08	97.25	299.08	109.00	6.47	67.70
CO050233-2	141.25	254.25	187.50	66.75	323.50	136.00	6.47	86.40
Denali (CO050303-2)	160.83	235.08	173.08	62.00	309.83	136.75	6.40	87.30
CO050337-2	125.42	226.42	156.58	69.83	293.75	137.17	6.27	86.40
Brawl CL Plus (CO06052)	123.25	206.58	132.00	74.58	246.33	114.33	6.20	67.70
Byrd (CO06424)	130.50	258.83	161.08	97.75	298.00	136.92	6.07	66.90
NE06430	146.75	260.58	175.75	84.83	306.17	130.42	6.40	67.70
NE07444	138.08	233.00	163.33	69.67	295.92	132.58	6.33	67.75
NE06607	128.00	270.50	165.17	105.33	275.25	110.08	6.33	67.05
NI08708	133.58	227.67	163.83	63.83	296.58	132.75	6.27	67.85
TX06A001281	119.08	263.00	148.58	114.42	264.92	116.33	6.33	68.50
TX05V7259	164.75	242.67	183.00	59.67	309.75	126.75	6.53	67.75
TX05A001188	136.67	243.75	168.92	74.83	298.00	129.08	6.40	67.75
TX07A001505	116.83	254.75	180.92	73.83	322.00	141.08	6.33	67.80
TX03A0563-07AZHR247	139.25	208.00	160.58	47.42	294.67	134.08	6.27	86.65
TX07A001118	113.42	251.83	156.50	95.33	284.92	128.42	6.20	67.75
TX07A001305	145.00	253.67	176.33	77.33	312.42	136.08	6.40	67.80
TX06V7266	139.17	242.58	173.67	68.92	313.75	140.08	6.33	67.70
CO050322	119.92	218.33	153.42	64.92	289.67	136.25	6.20	85.70
CO05W111	133.17	229.00	156.00	73.00	292.17	136.17	6.20	86.50

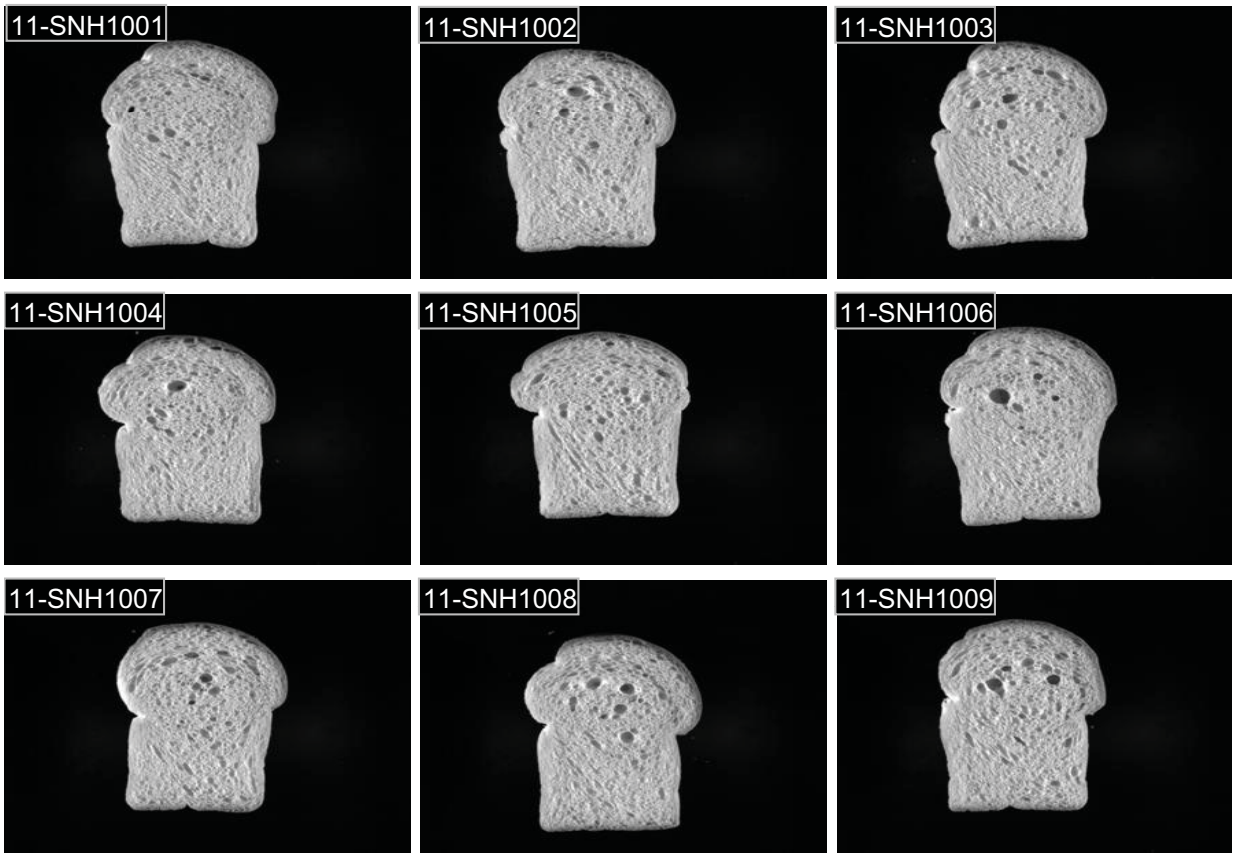
2011 SRPN Intraregional Production Zone

Northern High Plains

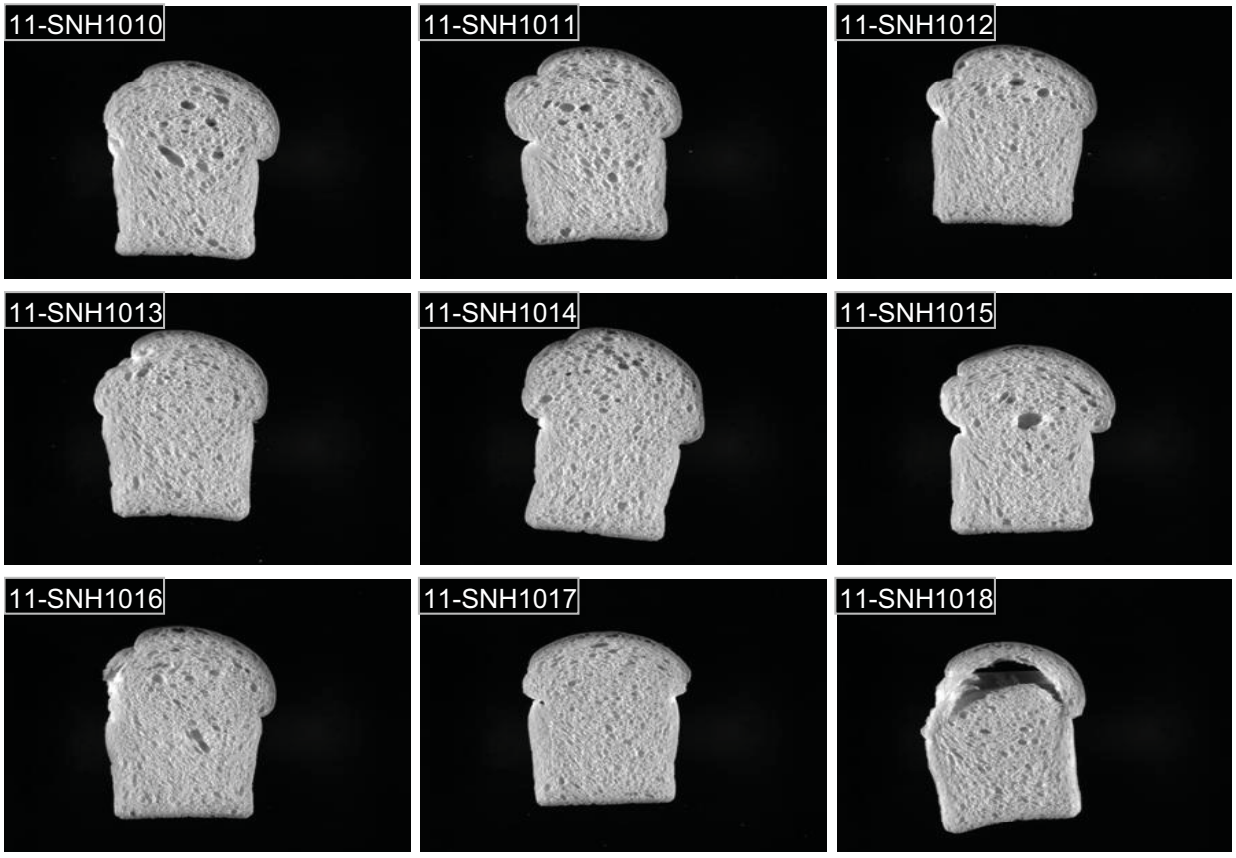
	Flour		Mix Time		Dough					
	Protein	Water Abs.	As-is	Corrected	Weight	Proof Height	Crumb Grain	As-Rec'd.	Specific Volume	Loaf Volume Potential
Line	(%)	(%)	(min)	(min)	(g)	(cm)		(cc)	(cc/g)	(cc/%)
Kharkof	12.9	62.7	5.50	5.50	171.5	7.5	4.5	910	6.1	62
Scout 66	12.0	61.9	4.38	4.38	171.0	7.3	4.5	895	6.0	66
TAM-107	11.7	60.7	3.50	3.39	169.7	7.3	3.5	910	6.2	70
Fuller	12.3	62.6	4.75	4.75	172.1	6.8	3.2	830	5.6	57
Clara CL (KS08HW35-1)	11.6	60.9	4.25	4.07	169.7	6.5	3.0	805	5.4	58
Iba (OK07209)	11.0	59.9	4.25	3.76	169.0	7.0	4.0	855	5.9	69
Gallagher (OK07214)	11.8	61.6	5.50	5.36	170.7	6.8	2.0	810	5.4	58
OK07231	11.7	61.7	5.13	4.96	171.1	7.1	3.0	865	5.9	65
OK08328	11.2	60.5	3.88	3.51	169.5	6.9	2.5	835	5.7	65
OK07218	12.1	62.5	4.63	4.63	172.0	6.9	3.0	865	5.7	62
OK06336	12.4	62.7	5.13	5.13	170.8	7.0	2.5	885	6.1	62
KS020822-M-5	12.8	62.7	4.38	4.38	173.1	6.6	3.0	785	5.2	49
KS020638-5-1	12.2	60.9	3.25	3.25	170.7	6.8	3.0	830	5.6	58
KS020319-7-2	11.9	62.1	4.25	4.19	170.6	7.2	2.5	925	6.3	70
KS020319-7-3	12.0	61.9	4.13	4.13	171.5	7.0	3.0	870	5.8	63
CO050233-2	11.7	61.7	3.00	2.88	171.0	7.0	3.0	830	5.6	61
Denali (CO050303-2)	10.7	60.7	3.63	3.08	169.7	6.6	3.5	730	4.9	55
CO050337-2	10.9	60.7	4.00	3.47	169.6	6.6	2.5	765	5.1	58
Brawl CL Plus (CO06052)	12.4	61.9	4.50	4.50	170.8	7.1	3.5	920	6.2	66
Byrd (CO06424)	10.9	59.8	7.25	6.26	167.9	6.9	3.5	850	5.8	69
NE06430	11.4	60.8	6.50	6.05	169.3	6.8	4.2	870	6.0	67
NE07444	12.0	61.8	6.13	6.11	171.1	6.9	3.5	850	5.6	61
NE06607	12.4	61.8	6.13	6.13	170.4	7.5	4.5	950	6.5	69
NI08708	12.4	61.9	5.00	5.00	170.9	7.0	3.0	925	6.3	67
TX06A001281	12.1	60.6	3.00	3.00	170.0	7.0	1.5	925	6.3	68
TX05V7259	12.0	62.8	6.25	6.24	171.8	6.9	4.0	845	5.6	61
TX05A001188	12.3	62.8	5.00	5.00	172.5	7.1	4.5	940	6.3	69
TX07A001505	11.7	61.8	8.50	8.15	170.3	6.7	4.0	820	5.5	60
TX03A0563-07AZHR247	12.3	61.7	3.75	3.75	171.8	7.2	3.0	900	6.0	64
TX07A001118	11.4	61.6	5.38	4.96	171.0	6.8	3.0	855	5.7	66
TX07A001305	10.9	61.7	3.75	3.26	171.3	7.4	3.0	930	6.3	79
TX06V7266	11.7	58.7	2.75	2.64	168.1	6.9	2.5	790	5.4	56
CO050322	10.6	61.1	4.00	3.32	170.6	6.8	4.0	805	5.4	66
CO05W111	11.3	60.0	3.50	3.20	169.5	6.9	4.2	875	5.9	69

2011 SRPN Intraregional Production Zone

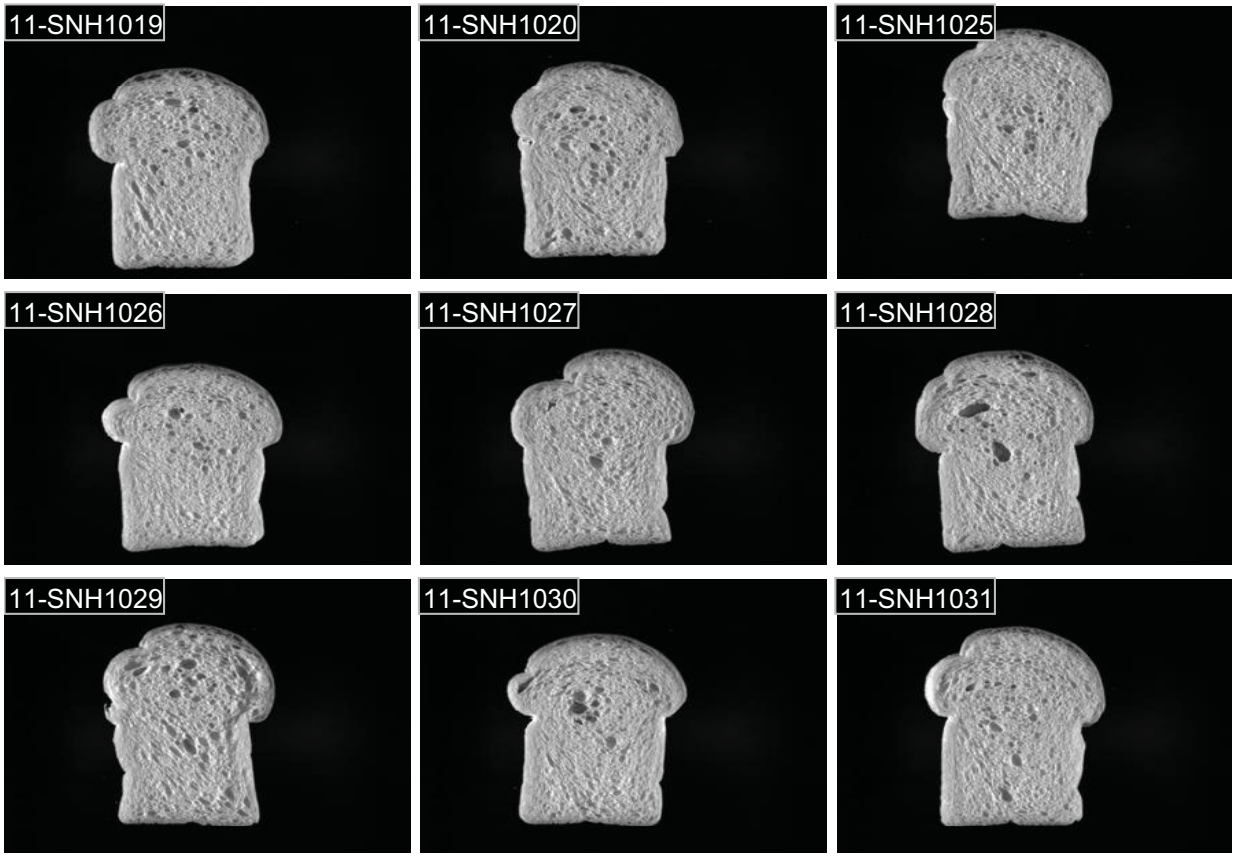
Northern High Plains



2011 SRPN Intraregional Production Zone
Northern High Plains

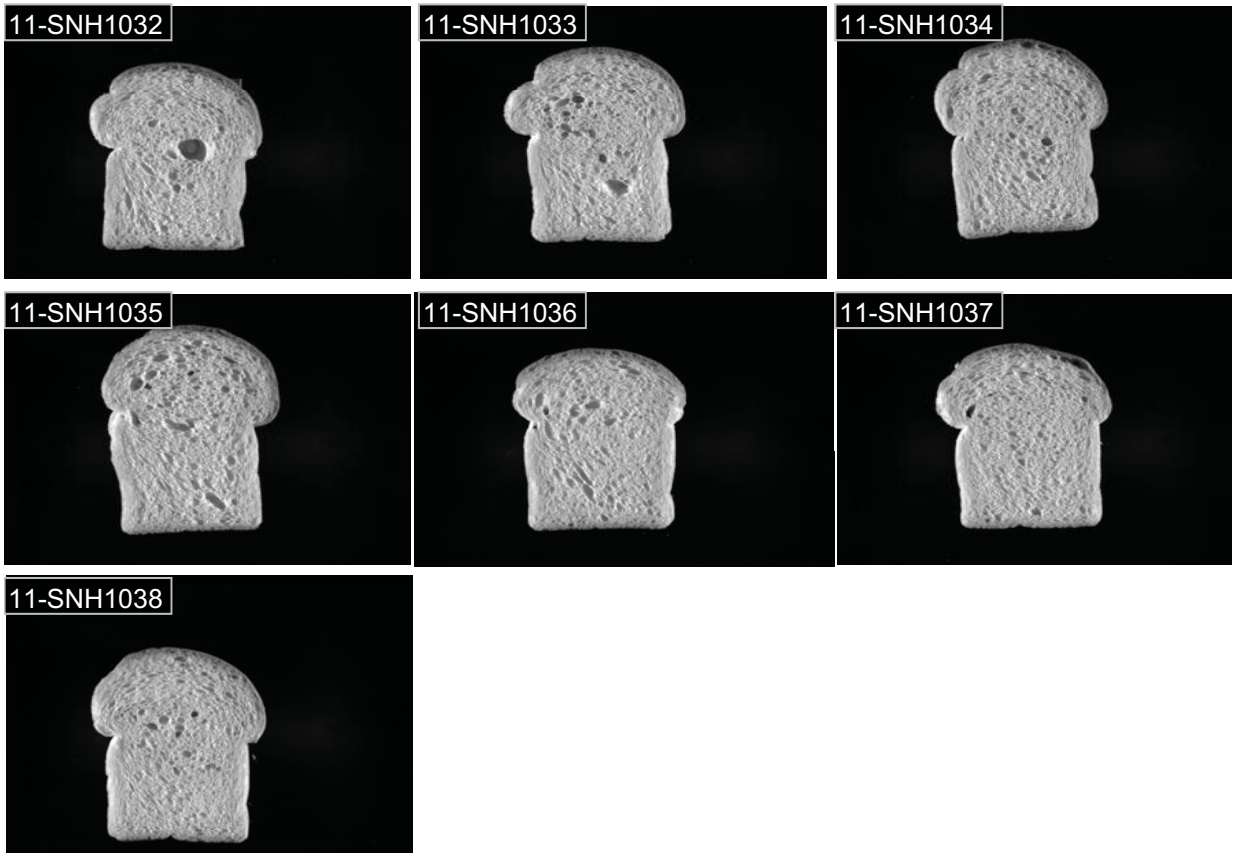


2011 SRPN Intraregional Production Zone
Northern High Plains



2011 SRPN Intraregional Production Zone

Northern High Plains



Hard Winter Wheat Quality Report

2011 SRPN-SCP

1 - Test weight	10	11 - Flour protein	8
2 - SKCS kernel weight	8	12 - Bake absorption	15
3 - Kernel weight SD	8	13 - Mixograph absorption	5
4 - SKCS kernel diameter	8	14 - Bake mix time	10
5 - Kernel diameter SD	8	15 - Mixograph mix time	5
6 - SKCS hardness	10	16 - Mixograph tolerance	5
7 - Hardness SD	8	17 - Dough weight	
8 - Flour yield	30	18 - Proof height	2
9 - Flour ash	10	19 - Loaf volume	20
10 - Milling score		20 - Volume regression	5
		21 - Crumb grain	25

ID	Milling Score	Rating	%	Baking Score	Rating	%	1RS	Trait Deficiencies
Kharkof	42.0	Very Poor	64.7	49.0	Very Good	91.0		1,2,4,8,10,
Scout 66	59.6	Average	91.9	50.2	Very Good	93.4		
TAM 107	57.2	Very Poor	88.2	44.3	Good	82.3	1AL	5,21,
Fuller	57.1	Very Poor	87.9	51.4	Very Good	95.5		
Clara CL	60.9	Good	93.8	40.1	Average	74.6		8,
Iba	58.5	Poor	90.1	48.7	Very Good	90.5		11,13,
Gallagher	62.2	Good	95.8	43.1	Good	80.1		13,21,
OK07231	61.1	Good	94.1	40.9	Average	75.9		6,10,
OK08328	57.7	Poor	88.9	35.9	Poor	66.8		5,12,13,16,17,
OK07218	59.3	Average	91.4	41.9	Average	77.9		
OK06336	56.6	Very Poor	87.2	47.5	Good	88.3		1,9,10,
KS020822-M-5	62.4	Very Good	96.2	44.1	Good	82.0		2,4,
KS020638-5-1	63.1	Very Good	97.2	38.1	Poor	70.8		3,16,
KS020319-7-2	58.6	Poor	90.3	46.8	Good	87.0		9,21,
KS020319-7-3	57.9	Poor	89.3	38.6	Poor	71.7		16,
CO050233-2	61.0	Good	94.0	30.5	Very Poor	56.7		16,
Denali	60.5	Good	93.2	29.4	Very Poor	54.7		16,
CO050337-2	56.8	Very Poor	87.5	35.7	Poor	66.3		3,16,
Brawl CL Plus	64.0	Very Good	98.6	47.6	Good	88.4		
Byrd	62.4	Very Good	96.1	41.1	Average	76.3		15,
NE06430	57.1	Very Poor	88.0	39.4	Poor	73.3		3,15,
NE07444	59.0	Average	90.9	36.4	Very Poor	67.7		
NE06607	59.9	Average	92.3	53.8	Very Good	100.0		
NI08708	60.5	Good	93.2	42.2	Average	78.3		
TX06A001281	57.1	Very Poor	88.0	39.2	Poor	72.8		16,21,
TX05V7259	58.4	Poor	89.9	35.8	Very Poor	66.5		18,21,
TX05A001188	61.1	Good	94.1	40.8	Average	75.9		18,
TX07A001505	60.1	Average	92.6	42.8	Average	79.6		14,15,
TX03A0563-07AZHR247	63.7	Very Good	98.2	47.1	Very Good	87.5		16,
TX07A001118	64.9	Very Good	100.0	44.1	Good	82.0		2,10,

Quality scores and ratings are calculated directly from the relative trait weightings (printed at the top of the page) and are applicable only to the nursery selected.

Hard Winter Wheat Quality Report

2011 SRPN-SCP

1 - Test weight	10	11 - Flour protein	8
2 - SKCS kernel weight	8	12 - Bake absorption	15
3 - Kernel weight SD	8	13 - Mixograph absorption	5
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5 - Kernel diameter SD	8	15 - Mixograph mix time	5
6 - SKCS hardness	10	16 - Mixograph tolerance	5
7 - Hardness SD	8	17 - Dough weight	
8 - Flour yield	30	18 - Proof height	2
9 - Flour ash	10	19 - Loaf volume	20
10 - Milling score		20 - Volume regression	5
		21 - Crumb grain	25

ID	Milling Score	Rating	%	Baking Score	Rating	%	1RS	Trait Deficiencies
TX07A001305	57.7	Poor	88.9	36.1	Poor	67.0		5,11,13,16,21,
TX06V7266	60.0	Average	92.4	25.2	Very Poor	46.8		12,14,16,17,19,20,21,
CO050322	58.2	Poor	89.6	31.8	Very Poor	59.1		16,17,19,20,21,
CO05W111	59.4	Average	91.5	28.2	Very Poor	52.4		16,18,19,20,

2011 SRPN Intraregional Production Zone

South Central Plains

		SKCS Average Kernel						Hardness			
		Moisture		Weight		Diameter		SKCS		Class	Distribution
LINE	Wt/Bu (lb)	(%)	(sd)	(mg)	(sd)	(mm)	(sd)		(sd)		
Kharkof	59.4	12.0	0.6	23.4	6.7	2.31	0.27	56	21	MIXED	13--23--23--41--03
Scout 66	61.0	11.9	0.6	28.4	7.7	2.51	0.29	74	17	HARD	01--04--14--81--01
TAM-107	59.8	11.8	0.6	31.1	7.7	2.59	0.34	75	19	HARD	02--07--12--79--01
Fuller	61.0	11.6	0.6	30.7	8.2	2.65	0.29	69	17	HARD	02--07--17--74--01
Clara CL (KS08HW35-1)	61.5	12.0	0.5	30.5	6.5	2.63	0.24	77	16	HARD	00--04--07--89--01
Iba (OK07209)	61.0	12.1	0.5	30.0	7.6	2.63	0.31	64	19	HARD	05--11--26--58--01
Gallagher (OK07214)	62.1	12.2	0.4	32.3	8.6	2.70	0.32	80	17	HARD	00--01--11--88--01
OK07231	61.1	12.2	0.5	31.2	7.4	2.66	0.28	85	15	HARD	00--01--05--94--01
OK08328	60.8	11.9	0.5	30.0	8.4	2.58	0.34	72	18	HARD	01--05--18--76--01
OK07218	61.0	11.6	0.6	33.5	8.6	2.73	0.32	66	18	HARD	02--12--21--65--01
OK06336	59.7	11.9	0.6	32.0	8.4	2.61	0.32	73	16	HARD	01--05--12--82--01
KS020822-M-5	62.2	10.8	0.8	24.9	7.0	2.44	0.25	80	17	HARD	00--02--07--91--01
KS020638-5-1	61.4	11.2	0.6	31.4	9.0	2.68	0.33	70	17	HARD	02--06--18--74--01
KS020319-7-2	61.4	11.1	0.5	28.6	7.7	2.50	0.30	75	19	HARD	01--05--14--80--01
KS020319-7-3	62.4	11.1	0.5	28.1	8.7	2.49	0.31	73	19	HARD	01--08--17--74--01
CO050233-2	60.6	11.2	0.6	29.8	7.4	2.61	0.30	72	17	HARD	00--06--18--76--01
Denali (CO050303-2)	61.5	11.2	0.7	29.0	7.7	2.51	0.29	70	16	HARD	01--07--17--75--01
CO050337-2	61.2	11.4	0.5	30.2	9.4	2.55	0.32	70	18	HARD	02--08--18--72--01
Brawl CL Plus (CO06052)	62.2	11.1	0.6	31.5	7.8	2.68	0.30	73	17	HARD	01--07--13--79--01
Byrd (CO06424)	61.1	11.3	0.6	28.1	7.6	2.51	0.26	72	18	HARD	02--05--19--74--01
NE06430	60.7	11.4	0.6	29.4	9.0	2.55	0.33	67	19	HARD	04--11--19--66--01
NE07444	60.1	11.4	0.6	29.5	8.3	2.57	0.30	70	16	HARD	00--06--19--75--01
NE06607	59.8	11.3	0.7	29.3	8.1	2.56	0.32	71	18	HARD	01--05--19--75--01
NI08708	60.3	11.1	0.6	30.9	8.2	2.59	0.28	68	17	HARD	02--09--16--73--01
TX06A001281	60.8	11.8	0.5	30.2	8.4	2.59	0.30	68	16	HARD	01--07--21--71--01
TX05V7259	61.4	11.4	0.5	29.4	7.0	2.58	0.27	74	18	HARD	01--05--13--81--01
TX05A001188	60.9	11.3	0.5	29.1	8.3	2.56	0.30	73	17	HARD	01--05--17--77--01
TX07A001505	61.9	11.5	0.5	28.6	7.5	2.54	0.28	75	19	HARD	01--06--13--80--01
TX03A0563-07AZHR247	62.4	11.3	0.5	28.2	8.0	2.57	0.30	75	16	HARD	00--02--15--83--01
TX07A001118	63.1	11.7	0.5	26.2	6.9	2.49	0.27	85	17	HARD	00--02--06--92--01
TX07A001305	60.6	11.3	0.5	29.0	8.3	2.57	0.34	75	18	HARD	01--04--14--81--01
TX06V7266	60.1	11.6	0.6	26.4	6.8	2.47	0.27	74	17	HARD	01--05--16--78--01
CO050322	60.6	11.3	0.6	29.8	8.6	2.54	0.31	68	17	HARD	02--10--19--69--01
CO05W111	61.5	10.9	0.6	27.3	7.7	2.47	0.28	70	18	HARD	01--08--20--71--01

2011 SRPN Intraregional Production Zone

South Central Plains

	Wheat		Flour			Noodle Color					
LINE	Protein (%)	Milling Yield (%)	Ash (%)	Protein (%)	PPO	L @ 0	a @ 0	b @ 0	Delta L 24 hrs	Delta a 24 hrs	Delta b 24 hrs
Kharkof	14.9	64.5	0.41	13.1	0.534	81.24	-1.32	22.95	-10.68	1.08	2.69
Scout 66	14.0	69.5	0.40	12.3	0.539	80.38	-1.09	23.35	-10.50	1.60	0.98
TAM-107	13.2	68.2	0.37	11.5	0.599	79.84	-1.32	26.52	-9.18	0.96	0.91
Fuller	13.5	67.7	0.37	12.0	0.653	82.18	-1.18	21.55	-13.36	1.28	3.86
Clara CL (KS08HW35-1)	13.7	66.7	0.38	12.0	0.610	80.97	-1.41	23.42	-11.46	1.82	0.31
Iba (OK07209)	12.6	69.1	0.34	11.2	0.569	81.93	-1.90	24.06	-9.58	1.68	1.53
Gallagher (OK07214)	12.7	68.7	0.37	11.4	0.177	81.44	-1.78	25.30	-8.68	1.05	3.07
OK07231	13.5	67.5	0.42	11.8	0.184	81.83	-1.24	22.57	-9.32	1.00	4.26
OK08328	12.7	69.3	0.40	11.4	0.523	81.49	-0.96	21.58	-12.76	1.15	5.12
OK07218	13.4	70.3	0.43	12.1	0.549	80.62	-1.25	23.48	-11.43	1.66	2.71
OK06336	13.9	68.9	0.47	12.3	0.532	81.08	-1.32	23.60	-13.18	2.17	2.65
KS020822-M-5	14.2	70.3	0.41	12.7	0.611	80.91	-1.42	24.68	-11.12	1.02	3.02
KS020638-5-1	13.6	71.8	0.40	12.5	0.659	80.68	-1.09	22.04	-12.98	2.49	1.15
KS020319-7-2	13.6	70.2	0.44	12.1	0.627	80.77	-1.25	23.90	-11.26	2.28	0.32
KS020319-7-3	13.2	70.2	0.42	11.9	0.577	80.87	-1.15	22.30	-11.90	1.93	3.08
CO050233-2	13.1	70.0	0.39	11.6	0.728	80.34	-0.84	23.25	-11.93	2.13	0.42
Denali (CO050303-2)	12.9	70.1	0.41	11.4	0.589	80.25	-1.62	25.85	-11.53	2.69	0.28
CO050337-2	13.0	69.6	0.41	11.6	0.626	82.57	-1.62	23.81	-11.92	2.21	2.40
Brawl CL Plus (CO06052)	14.0	70.7	0.40	12.4	0.660	81.48	-1.23	23.18	-12.45	1.80	1.88
Byrd (CO06424)	13.3	72.3	0.43	11.8	0.653	81.84	-0.93	21.79	-15.20	1.59	3.39
NE06430	13.4	70.6	0.39	11.9	0.697	80.64	-0.90	22.12	-14.10	1.51	2.52
NE07444	13.6	70.5	0.43	12.0	0.642	81.53	-0.91	22.21	-13.12	1.58	3.40
NE06607	13.7	71.5	0.41	12.3	0.603	82.26	-0.60	19.00	-14.99	1.19	5.46
NI08708	13.7	70.0	0.37	12.1	0.785	81.41	-0.93	21.88	-13.00	1.27	1.35
TX06A001281	14.1	68.2	0.40	12.7	0.676	80.60	-1.23	23.20	-13.85	1.93	2.12
TX05V7259	13.8	68.0	0.41	12.3	0.723	81.21	-1.21	22.28	-12.50	2.01	2.06
TX05A001188	14.2	70.8	0.39	12.4	0.698	81.02	-0.98	22.32	-13.14	1.32	0.56
TX07A001505	13.9	70.0	0.40	12.0	0.603	81.57	-1.08	21.80	-13.96	1.39	5.88
TX03A0563-07AZHR247	14.1	70.6	0.38	12.5	0.562	82.42	-0.95	20.91	-14.87	1.02	4.85
TX07A001118	13.7	70.8	0.44	11.7	0.190	82.56	-1.54	22.65	-12.27	0.74	8.70
TX07A001305	12.6	68.8	0.38	11.0	0.510	81.52	-1.25	22.20	-11.28	1.32	3.66
TX06V7266	13.6	70.5	0.42	12.0	0.724	81.35	-1.14	21.65	-14.26	1.33	5.05
CO050322	12.8	70.0	0.39	11.6	0.560	82.82	-1.23	21.08	-14.06	1.14	7.67
CO05W111	13.4	69.8	0.38	12.1	0.646	83.02	-1.60	22.89	-13.38	1.46	4.67

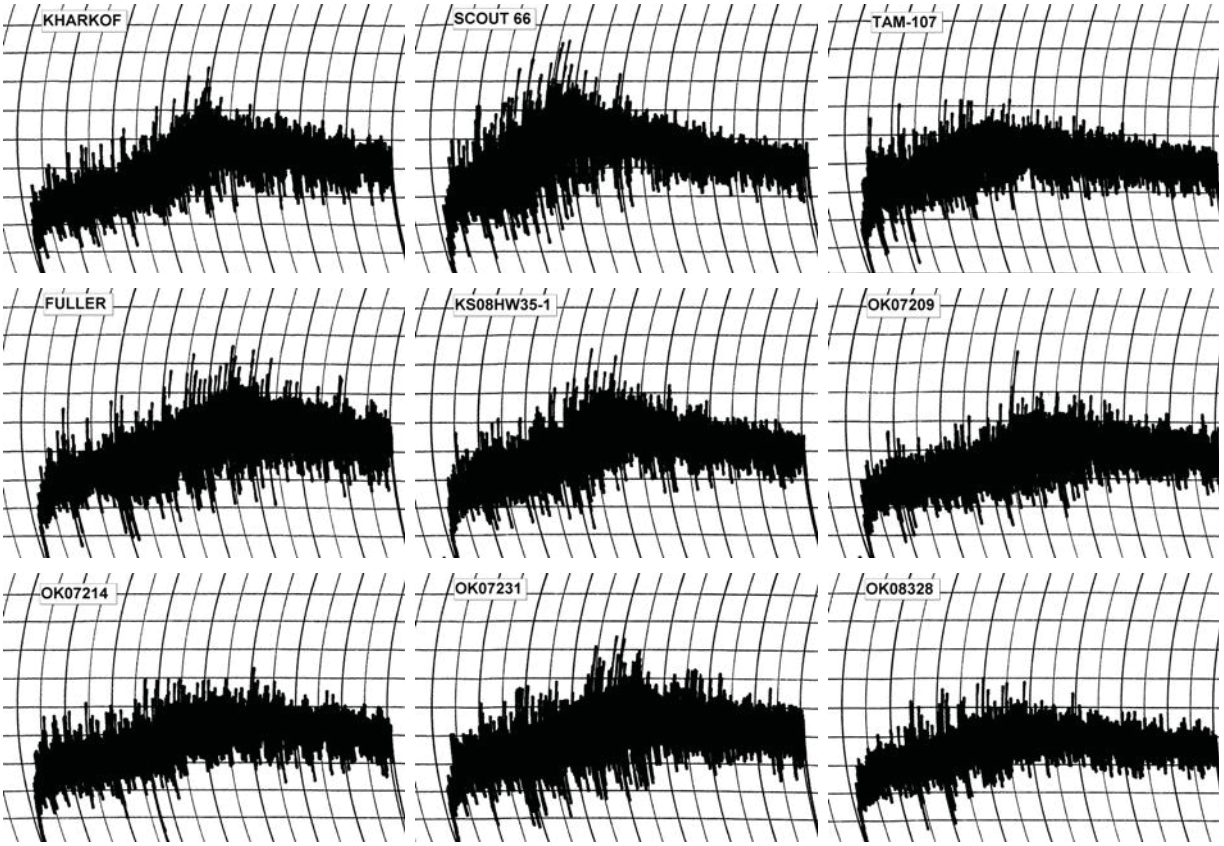
2011 SRPN Intraregional Production Zone

South Central Plains

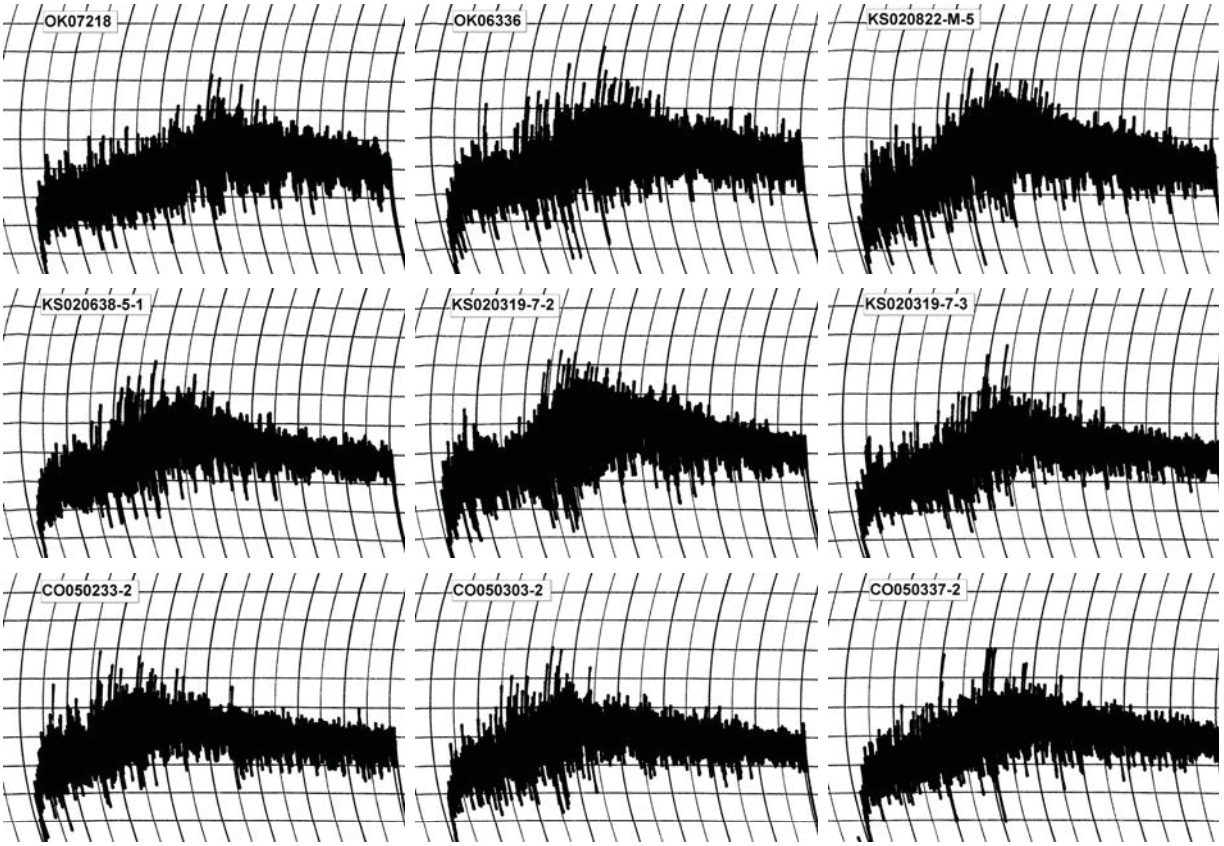
		Mixograph			
	Flour Protein	Absorption	As-Is	Corrected	Tolerance
Line	(%)	(%)	(min)	(min)	
Kharkof	13.1	64.7	4.00	4.00	3
Scout 66	12.3	64.1	3.00	3.00	3
TAM-107	11.5	62.6	3.38	3.16	3
Fuller	12.0	63.4	4.63	4.63	4
Clara CL (KS08HW35-1)	12.0	63.4	3.88	3.88	3
Iba (OK07209)	11.2	62.1	4.38	3.97	3
Gallagher (OK07214)	11.4	62.3	4.25	3.92	3
OK07231	11.8	63.0	4.38	4.29	4
OK08328	11.4	62.1	3.63	3.37	2
OK07218	12.1	64.1	4.38	4.38	3
OK06336	12.3	64.8	4.00	4.00	4
KS020822-M-5	12.7	64.8	3.50	3.50	3
KS020638-5-1	12.5	64.6	3.50	3.50	2
KS020319-7-2	12.1	63.3	3.38	3.38	3
KS020319-7-3	11.9	63.8	3.38	3.32	2
CO050233-2	11.6	63.5	2.63	2.52	2
Denali (CO050303-2)	11.4	63.2	3.00	2.79	2
CO050337-2	11.6	63.7	3.50	3.33	2
Brawl CL Plus (CO06052)	12.4	63.7	4.00	4.00	4
Byrd (CO06424)	11.8	62.9	5.63	5.46	4
NE06430	11.9	64.1	5.38	5.32	4
NE07444	12.0	63.2	5.13	5.13	4
NE06607	12.3	64.5	4.75	4.75	4
NI08708	12.1	64.2	4.88	4.88	3
TX06A001281	12.7	65.5	3.00	3.00	2
TX05V7259	12.3	64.7	5.00	5.00	3
TX05A001188	12.4	64.8	4.00	4.00	3
TX07A001505	12.0	64.4	6.88	6.88	4
TX03A0563-07AZHR247	12.5	64.9	2.88	2.88	2
TX07A001118	11.7	63.8	4.50	4.36	4
TX07A001305	11.0	62.4	3.00	2.64	2
TX06V7266	12.0	64.4	2.38	2.38	1
CO050322	11.6	63.6	3.13	2.96	1
CO05W111	12.1	64.2	3.25	3.25	1

2011 SRPN Intraregional Production Zone

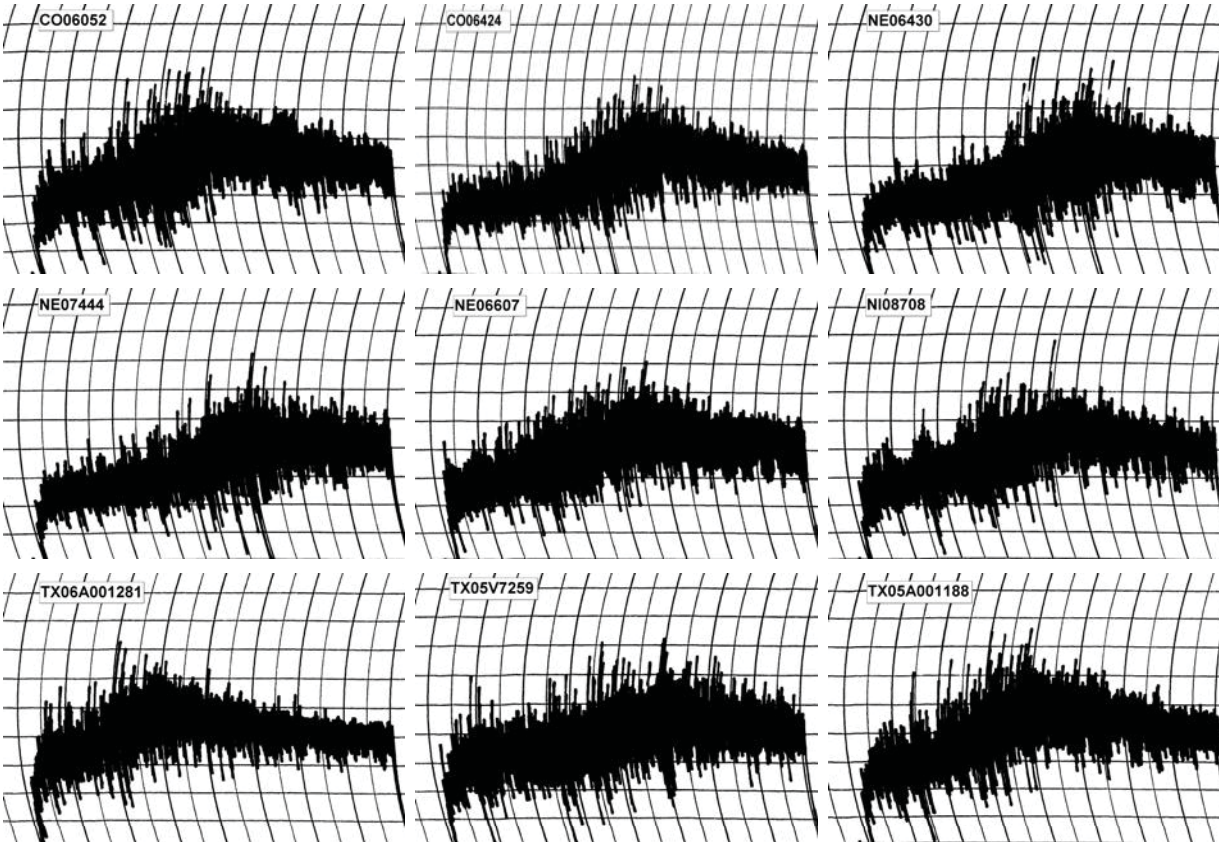
South Central Plains



2011 SRPN Intraregional Production Zone
South Central Plains

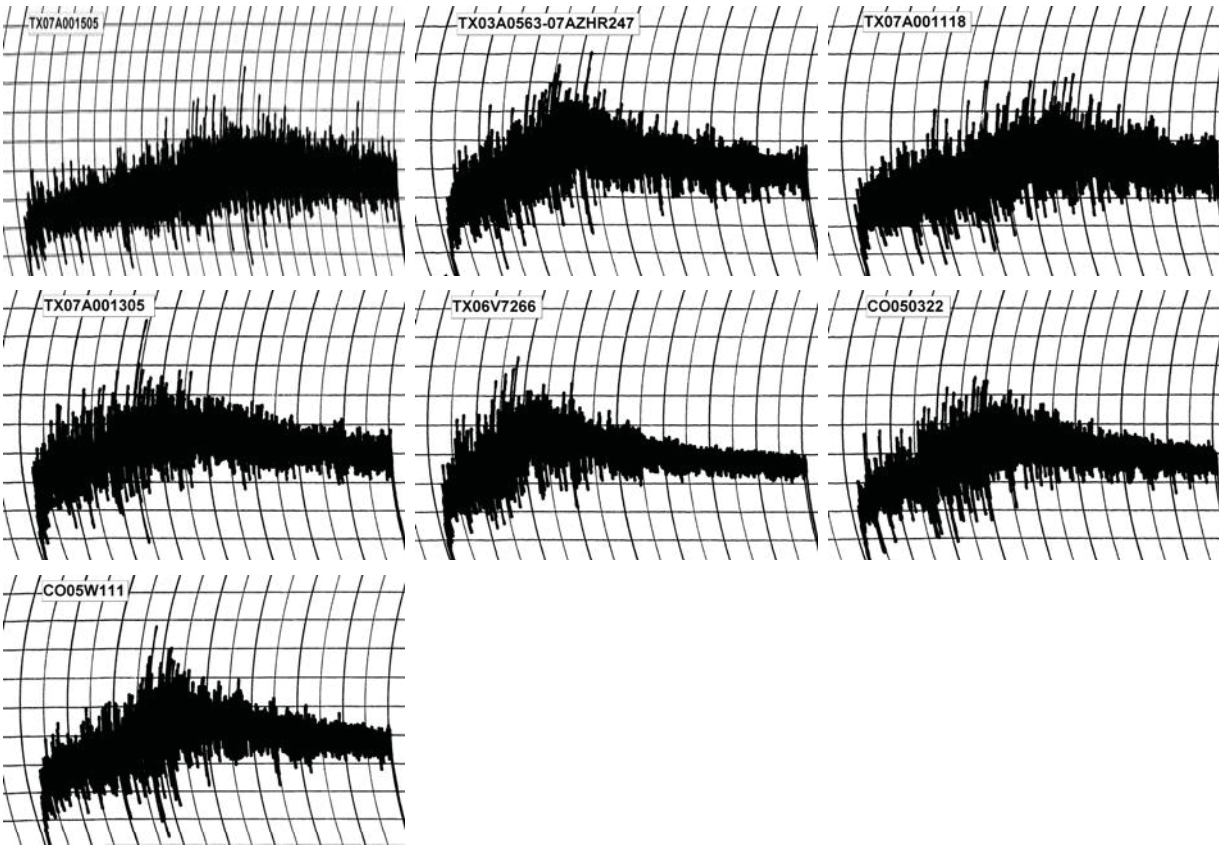


2011 SRPN Intraregional Production Zone
South Central Plains



2011 SRPN Intraregional Production Zone

South Central Plains



2011 SRPN Intraregional Production Zone

Southern Central Plains

	RVA							
Line	Stirring Number (RVU)	Peak Viscosity (RVU)	Trough Viscosity (RVU)	Breakdown (RVU)	Final Viscosity (RVU)	Set back (RVU)	Peak Time (min)	Pasting Temp (Deg. C)
Kharkof	137.83	240.00	167.75	72.25	287.25	119.50	6.40	86.50
Scout 66	129.42	203.50	134.50	69.00	252.17	117.67	6.07	67.75
TAM-107	120.00	264.50	175.83	88.67	303.00	127.17	6.27	67.65
Fuller	136.42	237.25	167.92	69.33	300.42	132.50	6.27	66.95
Clara CL (KS08HW35-1)	123.25	283.00	164.42	118.58	280.08	115.67	6.27	66.85
Iba (OK07209)	116.67	246.92	164.58	82.33	295.33	130.75	6.20	67.75
Gallagher (OK07214)	134.00	201.67	137.83	63.83	257.25	119.42	6.00	66.10
OK07231	137.00	211.92	143.75	68.17	266.75	123.00	6.07	66.00
OK08328	102.75	267.50	157.25	110.25	271.50	114.25	6.20	67.90
OK07218	113.83	212.58	144.25	68.33	264.67	120.42	6.13	67.75
OK06336	127.75	242.33	158.75	83.58	278.42	119.67	6.27	66.95
KS020822-M-5	131.00	242.67	173.83	68.83	300.25	126.42	6.33	67.85
KS020638-5-1	110.25	279.25	168.00	111.25	283.00	115.00	6.27	66.90
KS020319-7-2	122.25	276.42	163.42	113.00	269.33	105.92	6.20	66.85
KS020319-7-3	130.75	280.17	160.17	120.00	284.08	123.92	6.27	66.80
CO050233-2	111.25	239.58	172.33	67.25	299.83	127.50	6.33	67.80
Denali (CO050303-2)	141.75	220.00	157.00	63.00	279.92	122.92	6.27	67.85
CO050337-2	94.33	213.58	144.42	69.17	268.58	124.17	6.13	67.65
Brawl CL Plus (CO06052)	125.50	229.42	156.00	73.42	282.25	126.25	6.13	67.70
Byrd (CO06424)	119.00	248.75	157.25	91.50	288.75	131.50	6.00	66.85
NE06430	125.17	241.75	157.50	84.25	276.17	118.67	6.27	67.70
NE07444	118.75	209.25	138.08	71.17	261.92	123.83	6.07	66.85
NE06607	122.50	256.58	148.50	108.08	251.67	103.17	6.13	66.85
NI08708	123.25	223.92	156.00	67.92	282.08	126.08	6.20	66.95
TX06A001281	101.33	236.42	119.50	116.92	223.17	103.67	6.07	68.50
TX05V7259	147.58	230.75	165.08	65.67	282.67	117.58	6.40	66.95
TX05A001188	116.50	238.67	153.67	85.00	274.00	120.33	6.20	67.85
TX07A001505	115.83	236.17	156.42	79.75	285.92	129.50	6.07	67.75
TX03A0563-07AZHR247	128.42	199.00	149.67	49.33	282.92	133.25	6.07	67.00
TX07A001118	119.17	245.67	151.25	94.42	270.42	119.17	6.07	66.90
TX07A001305	106.92	242.17	163.67	78.50	289.58	125.92	6.27	67.90
TX06V7266	121.08	228.08	155.75	72.33	285.42	129.67	6.13	67.00
CO050322	116.00	203.83	136.17	67.67	259.25	123.08	6.00	67.80
CO05W111	120.08	199.58	125.75	73.83	237.67	111.92	5.93	67.70

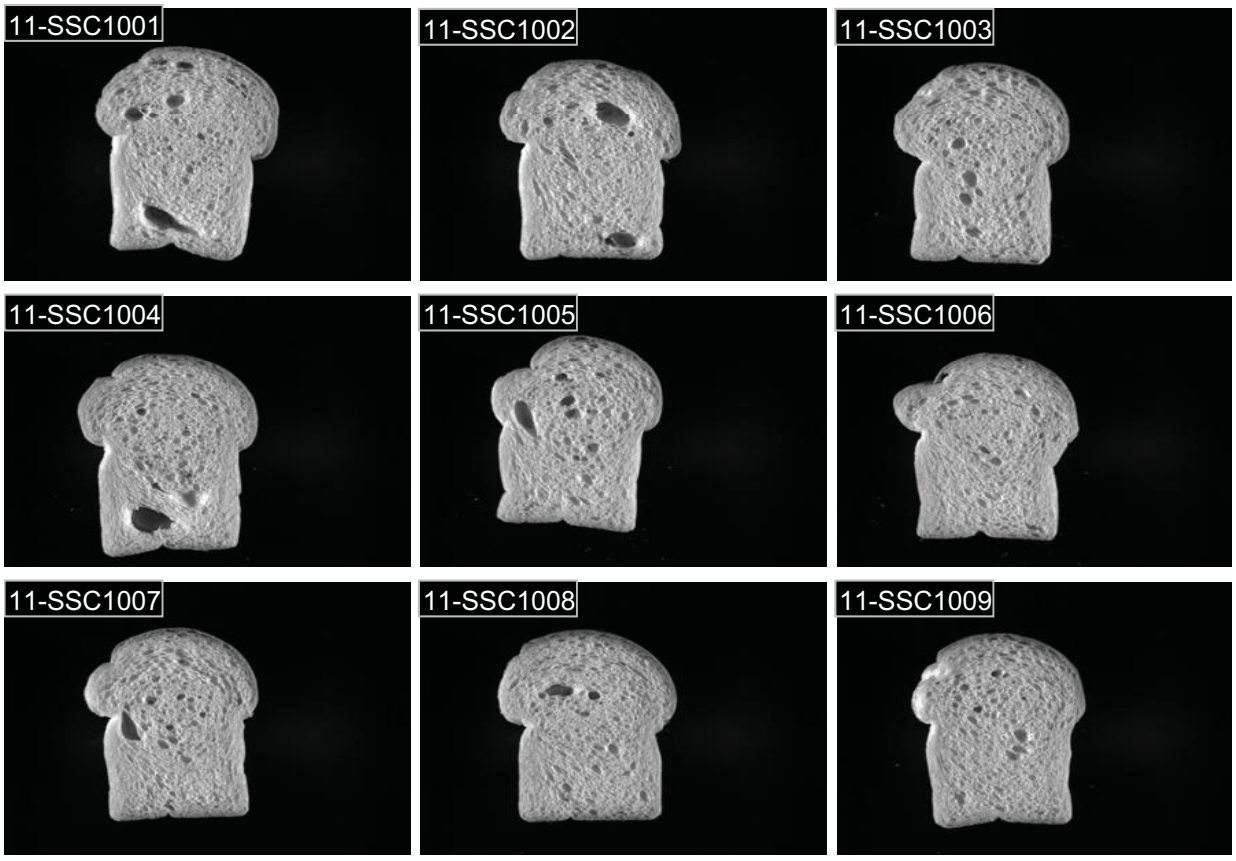
2011 SRPN Intraregional Production Zone

South Central Plains

	Flour		Mix Time		Dough					
	Protein	Water Abs.	As-is	Corrected	Weight	Proof Height	Crumb Grain	As-Rec'd.	Specific Volume	Loaf Volume Potential
Line	(%)	(%)	(min)	(min)	(g)	(cm)		(cc)	(cc/g)	(cc/%)
Kharkof	13.1	63.8	5.25	5.25	173.7	7.6	3.8	975	6.5	67
Scout 66	12.3	65.1	3.50	3.50	174.9	7.4	3.0	900	6.0	64
TAM-107	11.5	61.2	3.75	3.51	170.7	7.2	2.0	935	6.3	75
Fuller	12.0	62.7	5.88	5.88	172.0	7.5	3.0	925	6.2	69
Clara CL (KS08HW35-1)	12.0	62.2	4.38	4.38	171.7	7.0	2.5	880	5.9	64
Iba (OK07209)	11.2	61.2	5.00	4.53	171.6	6.9	3.0	880	6.0	70
Gallagher (OK07214)	11.4	61.2	4.88	4.50	170.4	6.9	2.0	860	5.8	67
OK07231	11.8	63.4	5.25	5.15	173.2	6.8	2.5	875	5.8	65
OK08328	11.4	59.6	4.25	3.94	169.2	7.2	2.8	875	6.0	68
OK07218	12.1	62.7	4.50	4.50	172.6	7.0	3.2	905	6.1	67
OK06336	12.3	63.4	4.88	4.88	172.7	7.1	2.8	925	6.2	67
KS020822-M-5	12.7	63.9	3.88	3.88	174.0	7.5	3.5	935	6.2	66
KS020638-5-1	12.5	61.8	3.88	3.88	170.6	6.9	2.8	890	6.1	62
KS020319-7-2	12.1	61.6	4.63	4.63	171.4	7.0	2.0	910	6.1	67
KS020319-7-3	11.9	61.6	4.00	3.93	171.6	6.9	2.5	905	6.1	68
CO050233-2	11.6	60.5	3.38	3.23	170.6	6.8	2.8	850	5.7	64
Denali (CO050303-2)	11.4	61.5	3.13	2.91	171.5	6.9	3.5	815	5.4	61
CO050337-2	11.6	61.3	3.75	3.57	171.2	7.2	2.5	860	5.8	65
Brawl CL Plus (CO06052)	12.4	62.6	4.25	4.25	172.5	7.5	3.5	980	6.6	72
Byrd (CO06424)	11.8	62.3	6.75	6.55	171.8	7.6	3.5	1005	6.8	80
NE06430	11.9	62.4	6.75	6.67	171.7	7.4	3.2	960	6.5	74
NE07444	12.0	62.5	6.13	6.13	172.2	6.9	2.5	875	5.8	64
NE06607	12.3	62.7	5.75	5.75	173.2	7.1	3.0	955	6.4	70
NI08708	12.1	62.6	4.88	4.88	171.8	7.2	2.8	905	6.2	66
TX06A001281	12.7	61.3	3.13	3.13	171.1	7.0	1.0	920	6.3	64
TX05V7259	12.3	63.5	5.75	5.75	173.0	6.6	1.5	830	5.5	57
TX05A001188	12.4	63.5	4.75	4.75	173.0	6.5		840	5.6	58
TX07A001505	12.0	62.3	8.50	8.50	170.7	7.0	4.0	850	5.8	61
TX03A0563-07AZHR247	12.5	62.6	3.38	3.38	172.2	7.1	3.0	905	6.0	64
TX07A001118	11.7	63.4	5.13	4.97	172.8	6.8	3.2	910	6.1	70
TX07A001305	11.0	61.6	3.25	2.86	171.2	6.8	2.0	845	5.6	68
TX06V7266	12.0	59.3	2.25	2.25	169.1	6.7	2.0	760	5.1	51
CO050322	11.6	60.3	3.25	3.08	169.6	6.8	2.0	780	5.2	56
CO05W111	12.1	60.5	3.25	3.25	170.1	6.6	2.5	795	5.3	54

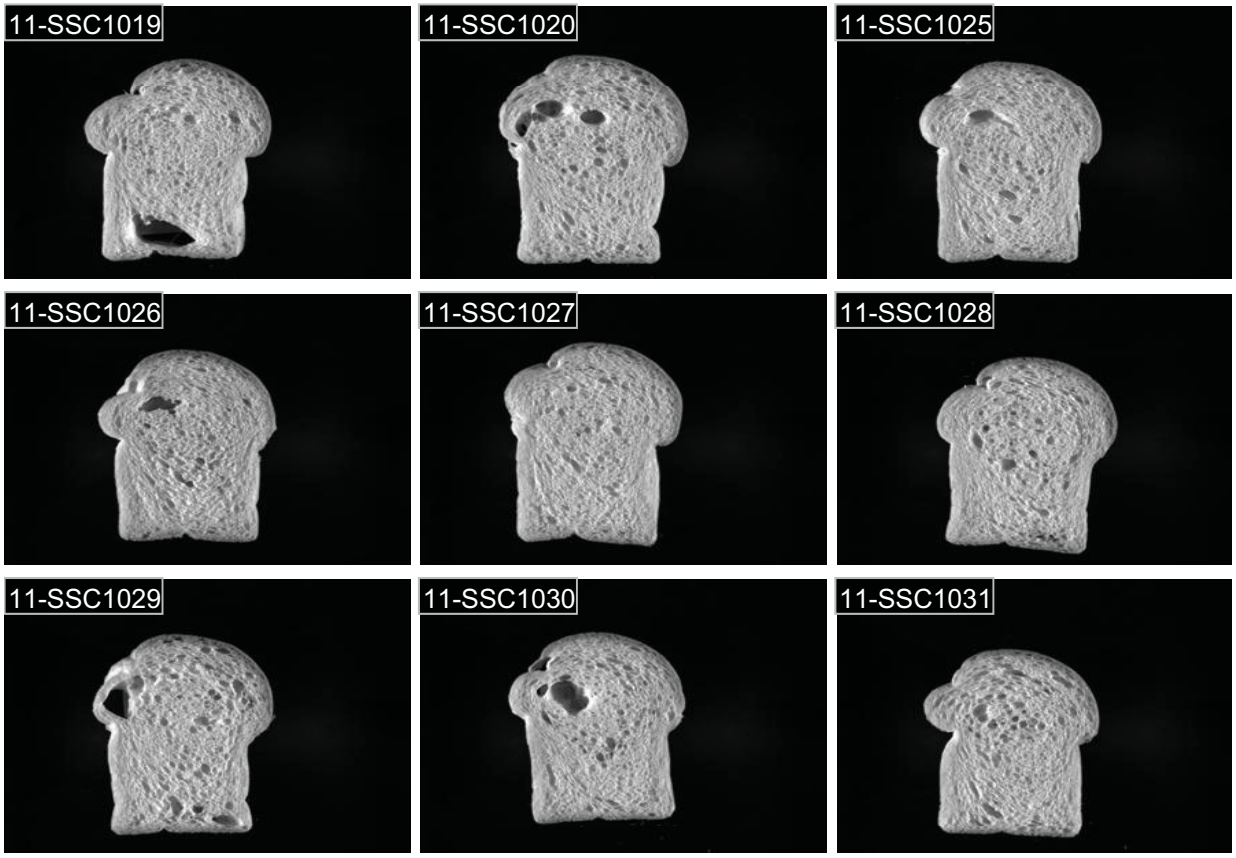
2011 SRPN Intraregional Production Zone

South Central Plains

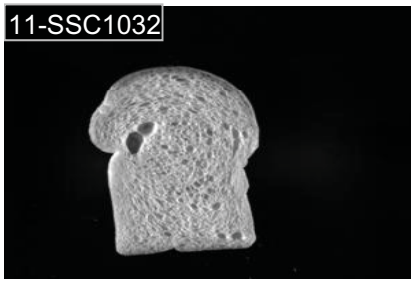


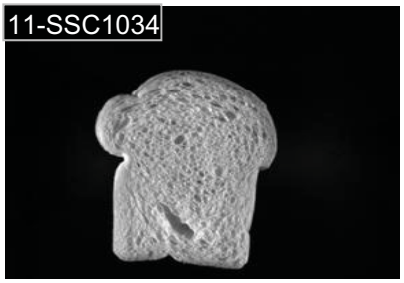
2011 SRPN Intraregional Production Zone
South Central Plains

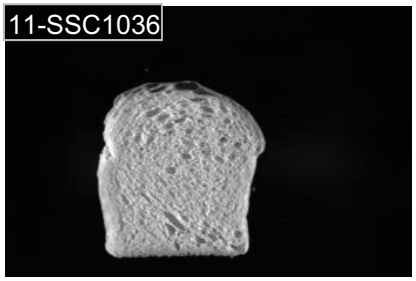
2011 SRPN Intraregional Production Zone
South Central Plains



2011 SRPN Intraregional Production Zone
South Central Plains







Hard Winter Wheat Quality Report

2011 SRPN-SHP

1 - Test weight	10	11 - Flour protein	8
2 - SKCS kernel weight	8	12 - Bake absorption	15
3 - Kernel weight SD	8	13 - Mixograph absorption	5
4 - SKCS kernel diameter	8	14 - Bake mix time	10
5 - Kernel diameter SD	8	15 - Mixograph mix time	5
6 - SKCS hardness	10	16 - Mixograph tolerance	5
7 - Hardness SD	8	17 - Dough weight	
8 - Flour yield	30	18 - Proof height	2
9 - Flour ash	10	19 - Loaf volume	20
10 - Milling score		20 - Volume regression	5
		21 - Crumb grain	25

ID	Milling Score	Rating	%	Baking Score	Rating	%	1RS	Trait Deficiencies
Kharkof	47.9	Very Poor	76.5	43.0	Very Good	78.1		2,4,9,10,16,
Scout 66	58.7	Very Good	93.8	26.4	Very Poor	47.9		14,16,
TAM 107	55.9	Average	89.2	26.3	Poor	47.8	1AL	14,16,21,
Fuller	54.4	Poor	86.8	49.8	Very Good	90.3		16,
Clara CL	61.0	Very Good	97.3	38.6	Average	70.1		16,21,
Iba	57.4	Good	91.6	31.8	Average	57.8		16,
Gallagher	56.0	Good	89.3	41.1	Good	74.7		16,21,
OK07231	55.8	Average	89.0	39.7	Good	72.0		9,16,
OK08328	52.6	Very Poor	83.9	28.6	Poor	51.9		3,13,16,21,
OK07218	55.8	Average	89.0	31.0	Poor	56.3		16,21,
OK06336	54.4	Poor	86.8	42.1	Good	76.4		9,16,21,
KS020822-M-5	58.2	Very Good	92.9	29.4	Poor	53.3		2,4,16,20,21,
KS020638-5-1	62.7	Very Good	100.0	33.3	Average	60.4		14,16,21,
KS020319-7-2	54.4	Average	86.9	30.3	Poor	54.9		16,21,
KS020319-7-3	54.6	Average	87.1	42.9	Good	77.9		16,
CO050233-2	52.5	Very Poor	83.7	33.9	Average	61.4		5,15,16,21,
Denali	56.6	Good	90.4	24.4	Very Poor	44.4		4,14,16,21,
CO050337-2	54.4	Poor	86.8	26.8	Poor	48.6		16,18,19,20,21,
Brawl CL Plus	57.0	Good	91.0	35.1	Average	63.8		16,
Byrd	57.2	Good	91.4	36.4	Average	66.0		2,4,13,21,
NE06430	53.3	Poor	85.0	46.9	Very Good	85.2		16,
NE07444	54.0	Poor	86.1	43.4	Good	78.8		16,
NE06607	54.2	Poor	86.5	39.3	Good	71.4		1,12,16,17,21,
NI08708	56.4	Good	90.0	55.1	Very Good	100.0		16,
TX06A001281	47.7	Very Poor	76.1	18.5	Very Poor	33.6		8,10,14,15,16,18,19,20,21,
TX05V7259	52.2	Very Poor	83.2	47.9	Very Good	87.0		8,
TX05A001188	57.4	Good	91.6	38.0	Average	69.0		16,18,
TX07A001505	54.7	Average	87.4	50.1	Very Good	90.9		15,
TX03A0563-07AZHR247	58.4	Very Good	93.2	25.7	Very Poor	46.7		14,16,
TX07A001118	62.4	Very Good	99.6	42.3	Good	76.8		16,21,

Quality scores and ratings are calculated directly from the relative trait weightings (printed at the top of the page) and are applicable only to the nursery selected.

Hard Winter Wheat Quality Report

2011 SRPN-SHP

1 - Test weight	10	11 - Flour protein	8
2 - SKCS kernel weight	8	12 - Bake absorption	15
3 - Kernel weight SD	8	13 - Mixograph absorption	5
4 - SKCS kernel diameter	8	14 - Bake mix time	10
5 - Kernel diameter SD	8	15 - Mixograph mix time	5
6 - SKCS hardness	10	16 - Mixograph tolerance	5
7 - Hardness SD	8	17 - Dough weight	
8 - Flour yield	30	18 - Proof height	2
9 - Flour ash	10	19 - Loaf volume	20
10 - Milling score		20 - Volume regression	5
		21 - Crumb grain	25

ID	Milling Score	Rating	%	Baking Score	Rating	%	1RS	Trait Deficiencies
TX07A001305	54.0	Poor	86.2	22.3	Very Poor	40.4		5,11,13,14,16,21,
TX06V7266	52.5	Very Poor	83.8	18.9	Very Poor	34.3		12,14,15,16,17,19,20,21,
CO050322	51.7	Very Poor	82.5	26.7	Poor	48.4		11,16,
CO05W111	54.6	Average	87.2	22.7	Very Poor	41.2		16,

2011 SRPN Intraregional Production Zone

Southern High Plains

		SKCS Average Kernel						Hardness			
		Moisture		Weight		Diameter		SKCS		Class	Distribution
LINE	Wt/Bu (lb)	(%)	(sd)	(mg)	(sd)	(mm)	(sd)		(sd)		
Kharkof	59.8	10.0	0.6	24.2	6.3	2.32	0.26	49	20	MIXED	20--30--21--29--03
Scout 66	60.7	10.1	0.6	29.5	9.7	2.52	0.34	63	19	HARD	07--12--17--64--02
TAM-107	59.9	10.0	0.6	31.8	9.4	2.60	0.38	70	19	HARD	03--08--18--71--01
Fuller	60.3	9.8	0.5	29.6	8.8	2.58	0.33	67	19	HARD	04--10--22--64--01
Clara CL (KS08HW35-1)	61.3	10.0	0.6	29.5	7.1	2.58	0.26	74	17	HARD	01--05--14--80--01
Iba (OK07209)	61.4	10.3	0.6	28.3	8.9	2.52	0.32	67	21	HARD	06--09--15--70--02
Gallagher (OK07214)	60.7	9.9	0.6	29.1	8.5	2.56	0.35	77	19	HARD	02--04--15--79--01
OK07231	59.7	9.4	0.7	29.5	9.5	2.56	0.35	78	18	HARD	01--04--11--84--01
OK08328	60.1	9.8	0.6	29.5	10.9	2.55	0.38	65	18	HARD	07--06--19--68--02
OK07218	60.2	10.5	0.5	31.9	9.7	2.60	0.37	67	19	HARD	04--10--22--64--01
OK06336	59.3	10.8	0.5	29.3	8.8	2.53	0.34	73	17	HARD	01--04--18--77--01
KS020822-M-5	61.1	9.9	0.5	24.5	7.5	2.40	0.28	72	22	HARD	04--10--15--71--01
KS020638-5-1	61.2	10.5	0.5	30.0	8.0	2.62	0.35	68	18	HARD	01--11--19--69--01
KS020319-7-2	60.2	10.1	0.7	28.8	8.6	2.51	0.32	62	20	HARD	07--18--20--55--02
KS020319-7-3	60.1	10.5	0.5	28.5	8.8	2.47	0.32	62	21	HARD	07--17--24--52--02
CO050233-2	60.0	9.6	0.8	30.0	10.1	2.59	0.41	67	19	HARD	04--11--18--67--01
Denali (CO050303-2)	60.6	10.2	0.5	26.6	8.7	2.39	0.33	67	17	HARD	03--08--21--68--01
CO050337-2	60.4	10.1	0.6	27.3	9.6	2.46	0.37	65	18	HARD	04--11--19--66--01
Brawl CL Plus (CO06052)	61.3	9.7	0.6	32.0	9.3	2.64	0.36	64	20	HARD	05--13--25--57--01
Byrd (CO06424)	60.5	9.8	0.6	25.6	8.7	2.39	0.34	67	20	HARD	05--11--17--67--01
NE06430	60.1	10.1	0.5	30.6	9.6	2.57	0.37	58	21	MIXED	13--16--21--50--03
NE07444	59.2	9.3	0.8	28.5	8.5	2.54	0.33	67	19	HARD	04--10--20--66--01
NE06607	58.8	9.1	0.8	29.1	8.9	2.54	0.33	61	21	HARD	10--16--17--57--02
NI08708	59.9	9.3	0.7	31.2	9.0	2.59	0.34	64	20	HARD	06--11--25--58--02
TX06A001281	59.5	8.0	0.9	29.0	8.9	2.52	0.34	67	20	HARD	04--11--19--66--01
TX05V7259	60.5	8.3	0.9	30.7	8.5	2.62	0.35	68	21	HARD	05--09--22--64--01
TX05A001188	61.1	8.5	0.8	27.1	8.7	2.47	0.34	69	21	HARD	05--09--21--65--01
TX07A001505	61.9	8.5	0.9	29.1	8.9	2.50	0.33	69	21	HARD	04--14--15--67--01
TX03A0563-07AZHR247	61.8	8.4	0.9	27.8	8.4	2.55	0.32	67	20	HARD	04--13--20--63--01
TX07A001118	63.1	9.2	1.0	26.5	7.7	2.49	0.31	78	18	HARD	01--03--09--87--01
TX07A001305	61.1	8.4	1.0	30.8	9.5	2.63	0.39	72	20	HARD	02--11--16--71--01
TX06V7266	59.5	8.8	0.8	26.5	8.4	2.47	0.35	67	19	HARD	04--12--15--69--01
CO050322	60.0	9.2	0.8	26.9	8.8	2.45	0.36	69	18	HARD	04--08--17--71--01
CO05W111	61.9	9.0	0.9	26.5	9.1	2.44	0.35	69	20	HARD	04--10--17--69--01

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	Wheat		Flour			Noodle Color					
LINE	Protein (%)	Milling Yield (%)	Ash (%)	Protein (%)	PPO	L @ 0	a @ 0	b @ 0	Delta L 24 hrs	Delta a 24 hrs	Delta b 24 hrs
Kharkof	15.1	68.2	0.46	13.7	0.516	78.32	-1.60	24.44	-12.48	2.29	-1.29
Scout 66	14.2	72.8	0.41	13.2	0.544	79.28	-1.65	25.44	-12.62	2.03	-0.54
TAM-107	13.4	70.5	0.42	12.1	0.538	78.74	-1.24	24.67	-13.05	2.74	-0.80
Fuller	14.0	69.1	0.40	12.7	0.588	79.96	-1.31	22.54	-14.20	2.23	-0.47
Clara CL (KS08HW35-1)	14.1	69.3	0.41	12.7	0.580	80.20	-1.78	23.22	-12.05	1.93	0.83
Iba (OK07209)	13.4	70.8	0.36	12.1	0.451	79.86	-2.00	26.64	-10.00	1.87	-0.85
Gallagher (OK07214)	14.0	69.2	0.43	13.0	0.152	80.46	-1.94	25.97	-9.99	1.70	1.63
OK07231	13.9	70.4	0.45	13.0	0.146	79.67	-0.87	22.33	-10.64	2.15	2.06
OK08328	12.9	70.0	0.41	11.9	0.468	79.79	-1.58	24.10	-18.02	2.43	-0.45
OK07218	13.5	71.2	0.45	12.6	0.487	79.62	-1.43	25.51	-14.12	1.63	-0.67
OK06336	14.4	69.3	0.47	13.4	0.446	78.58	-1.56	25.73	-13.06	2.80	-1.60
KS020822-M-5	15.0	72.1	0.41	13.8	0.522	79.28	-1.59	24.82	-13.44	2.37	-0.82
KS020638-5-1	13.9	72.7	0.41	12.9	0.611	78.94	-1.20	22.80	-12.37	2.14	-0.27
KS020319-7-2	14.0	71.1	0.45	12.8	0.542	78.81	-1.68	24.78	-12.35	1.89	-0.85
KS020319-7-3	13.8	71.4	0.43	12.6	0.461	78.24	-1.55	22.35	-13.43	1.48	1.08
CO050233-2	14.1	69.3	0.39	13.0	0.672	79.68	-1.05	21.95	-13.42	1.63	0.90
Denali (CO050303-2)	13.4	70.5	0.39	12.1	0.540	80.97	-1.83	23.91	-12.41	1.97	2.67
CO050337-2	13.7	70.7	0.41	12.1	0.546	80.54	-1.64	24.21	-12.59	1.19	3.07
Brawl CL Plus (CO06052)	14.6	70.6	0.40	13.2	0.594	79.09	-1.67	25.00	-10.84	1.68	-0.53
Byrd (CO06424)	13.2	72.6	0.40	11.9	0.600	80.25	-1.29	21.51	-13.69	1.37	2.14
NE06430	13.6	70.8	0.39	12.3	0.616	79.82	-1.49	22.23	-13.39	1.86	0.63
NE07444	14.6	70.1	0.44	13.2	0.563	79.33	-1.39	23.75	-11.17	2.17	-0.82
NE06607	14.4	71.2	0.39	12.9	0.524	79.92	-1.30	21.84	-12.87	2.29	-2.61
NI08708	14.6	70.6	0.38	13.2	0.650	79.79	-1.23	21.88	-11.82	2.37	-1.96
TX06A001281	15.8	66.6	0.43	13.5	0.562	79.13	-1.45	23.84	-13.13	2.40	-2.04
TX05V7259	14.9	67.5	0.39	13.3	0.610	80.22	-1.45	23.01	-10.49	1.71	-2.28
TX05A001188	14.5	71.0	0.35	13.2	0.578	81.53	-1.61	21.92	-10.99	2.03	-0.94
TX07A001505	14.0	69.0	0.36	12.8	0.526	80.86	-1.64	24.96	-11.22	1.71	1.01
TX03A0563-07AZHR247	14.6	70.6	0.35	13.2	0.473	80.02	-1.64	22.87	-9.95	1.68	-0.15
TX07A001118	13.9	71.2	0.42	12.4	0.107	81.11	-2.08	25.05	-11.27	1.27	4.00
TX07A001305	12.8	68.1	0.36	11.5	0.457	81.01	-1.71	21.87	-11.13	1.37	1.44
TX06V7266	14.3	68.3	0.35	12.9	0.579	79.68	-1.51	23.00	-13.04	1.43	0.67
CO050322	13.1	68.0	0.38	11.7	0.523	82.32	-2.34	24.42	-10.86	1.19	1.21
CO05W111	13.6	69.5	0.37	12.1	0.406	81.27	-2.02	23.99	-11.12	1.85	-0.95

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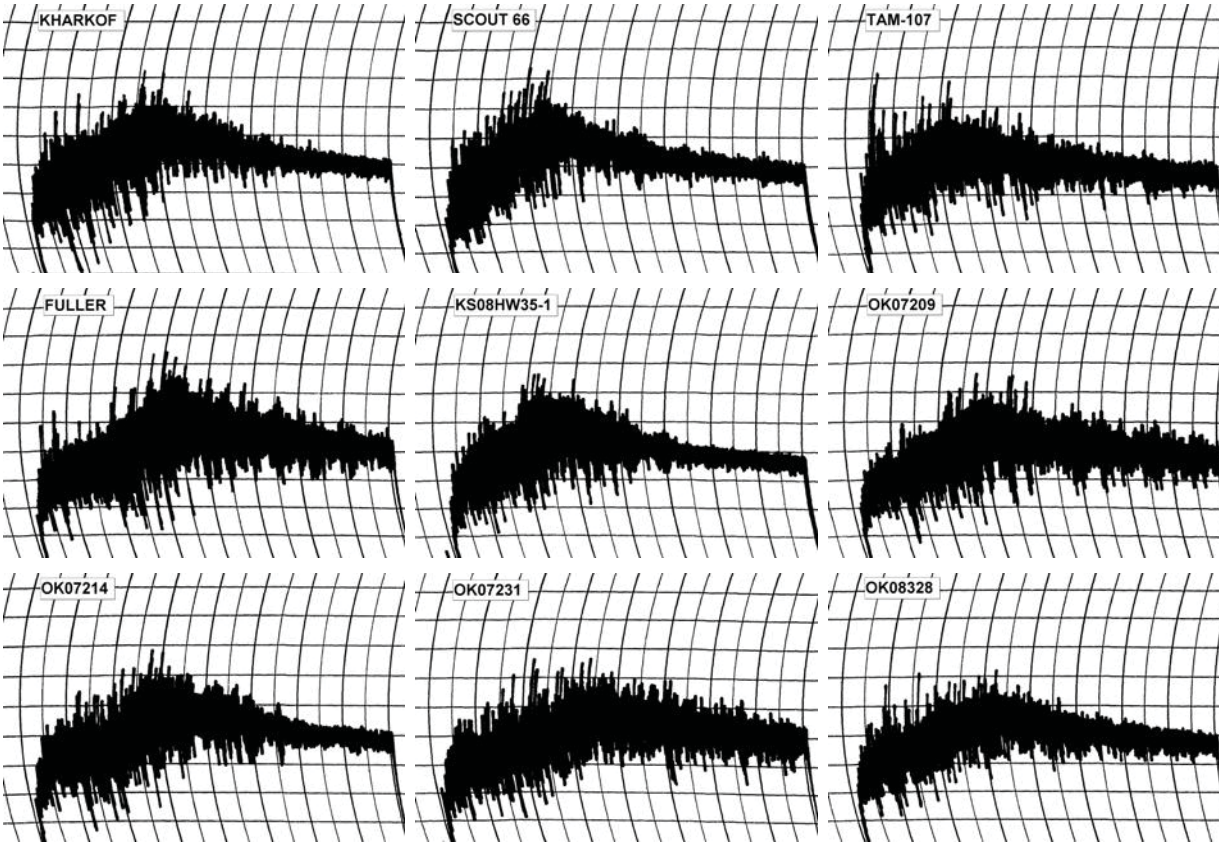
		Mixograph			
	Flour Protein	Absorption	As-Is	Corrected	Tolerance
Line	(%)	(%)	(min)	(min)	
Kharkof	13.7	64.2	3.00	3.00	0
Scout 66	13.2	65.1	2.38	2.38	0
TAM-107	12.1	63.1	2.25	2.25	1
Fuller	12.7	63.9	3.38	3.38	2
Clara CL (KS08HW35-1)	12.7	63.8	2.50	2.50	0
Iba (OK07209)	12.1	63.0	3.00	3.00	2
Gallagher (OK07214)	13.0	65.3	3.00	3.00	0
OK07231	13.0	64.5	3.50	3.50	2
OK08328	11.9	61.0	3.25	3.19	1
OK07218	12.6	63.6	3.00	3.00	0
OK06336	13.4	66.3	3.50	3.50	2
KS020822-M-5	13.8	65.3	2.63	2.63	1
KS020638-5-1	12.9	63.7	2.63	2.63	0
KS020319-7-2	12.8	63.7	2.50	2.50	0
KS020319-7-3	12.6	64.1	2.63	2.63	0
CO050233-2	13.0	64.4	1.63	1.63	0
Denali (CO050303-2)	12.1	64.0	2.88	2.88	0
CO050337-2	12.1	64.1	2.88	2.88	1
Brawl CL Plus (CO06052)	13.2	64.7	3.00	3.00	1
Byrd (CO06424)	11.9	61.2	5.00	4.94	3
NE06430	12.3	63.1	4.25	4.25	2
NE07444	13.2	65.6	4.00	4.00	1
NE06607	12.9	64.1	3.63	3.63	1
NI08708	13.2	63.4	3.38	3.38	2
TX06A001281	13.5	64.4	2.00	2.00	0
TX05V7259	13.3	65.2	3.88	3.88	3
TX05A001188	13.2	64.1	2.88	2.88	0
TX07A001505	12.8	64.5	5.75	5.75	4
TX03A0563-07AZHR247	13.2	65.1	2.50	2.50	0
TX07A001118	12.4	64.0	3.50	3.50	1
TX07A001305	11.5	62.2	2.38	2.23	1
TX06V7266	12.9	63.3	1.88	1.88	0
CO050322	11.7	62.6	2.88	2.78	1
CO05W111	12.1	63.3	2.63	2.63	1

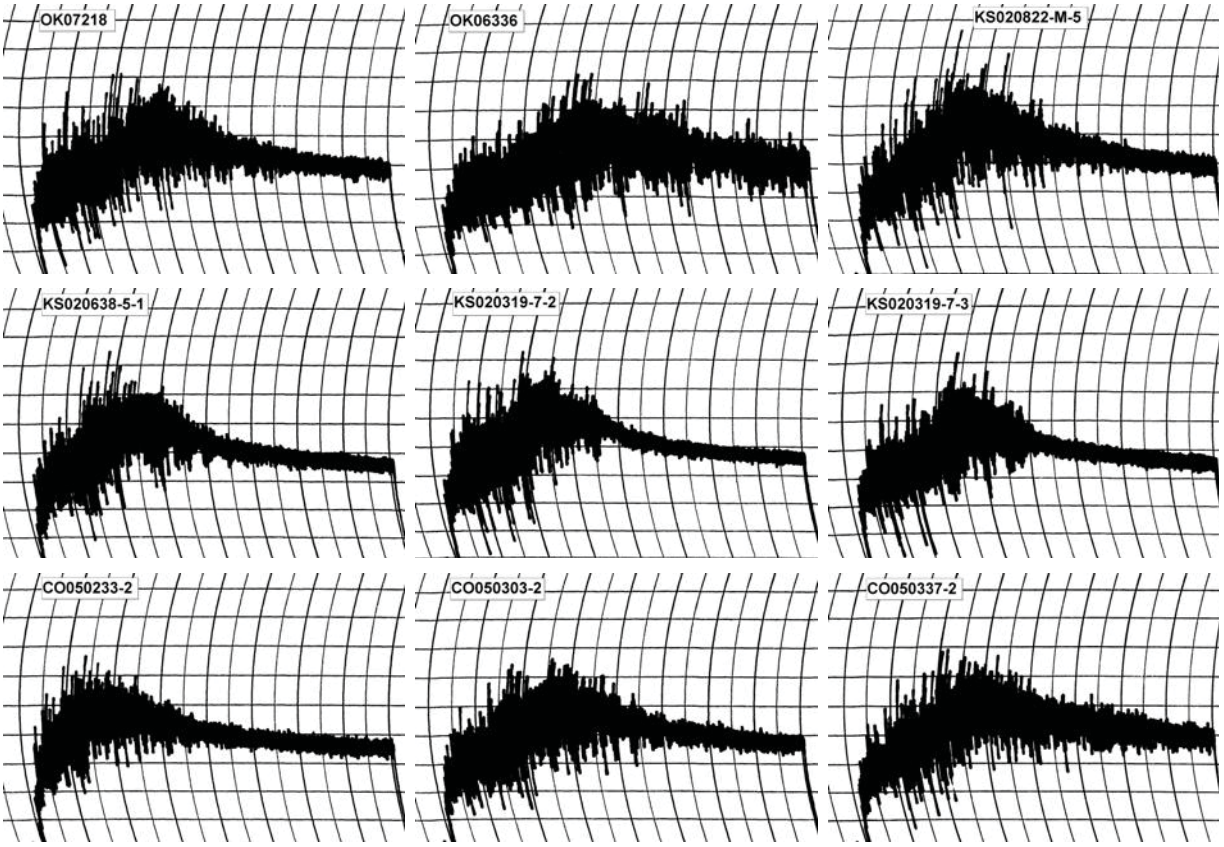
2011 SRPN Intraregional Production Zone

Southern High Plains



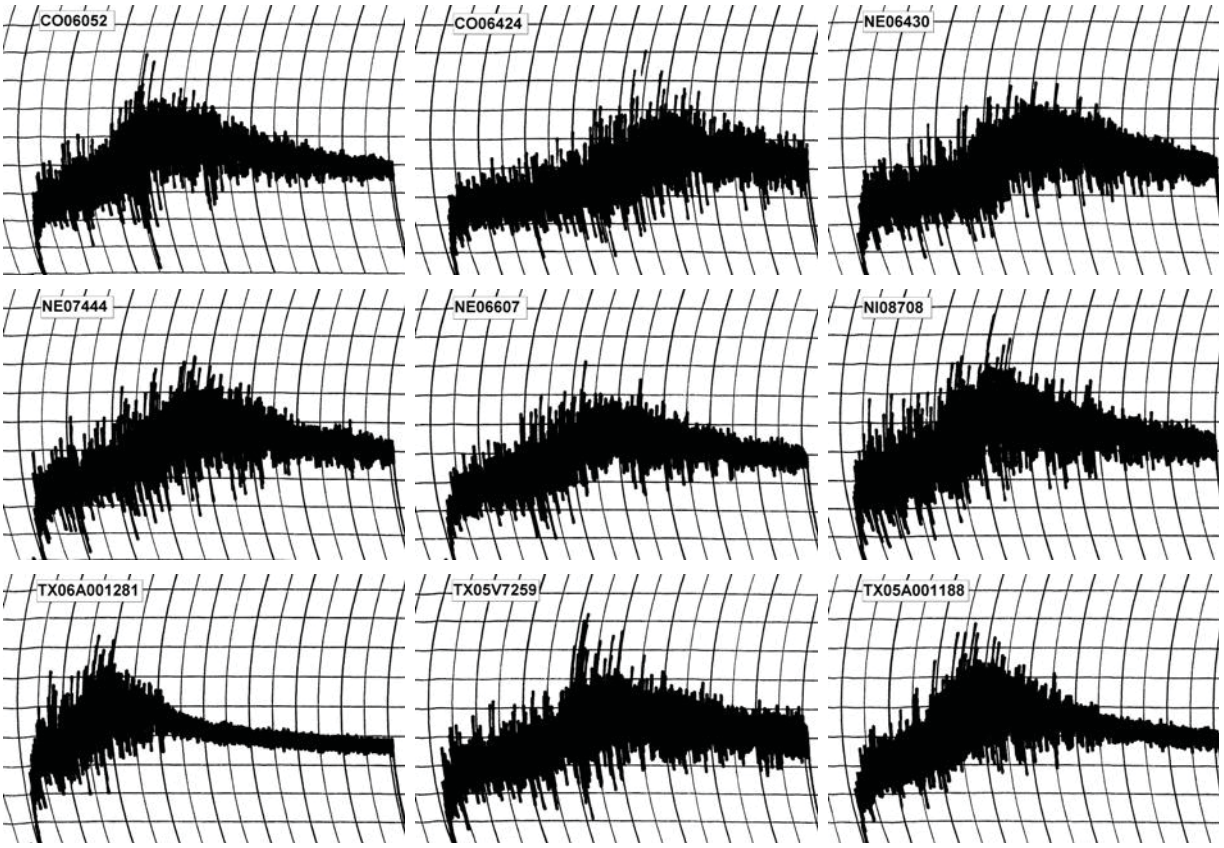
2011 SRPN Intraregional Production Zone

Southern High Plains



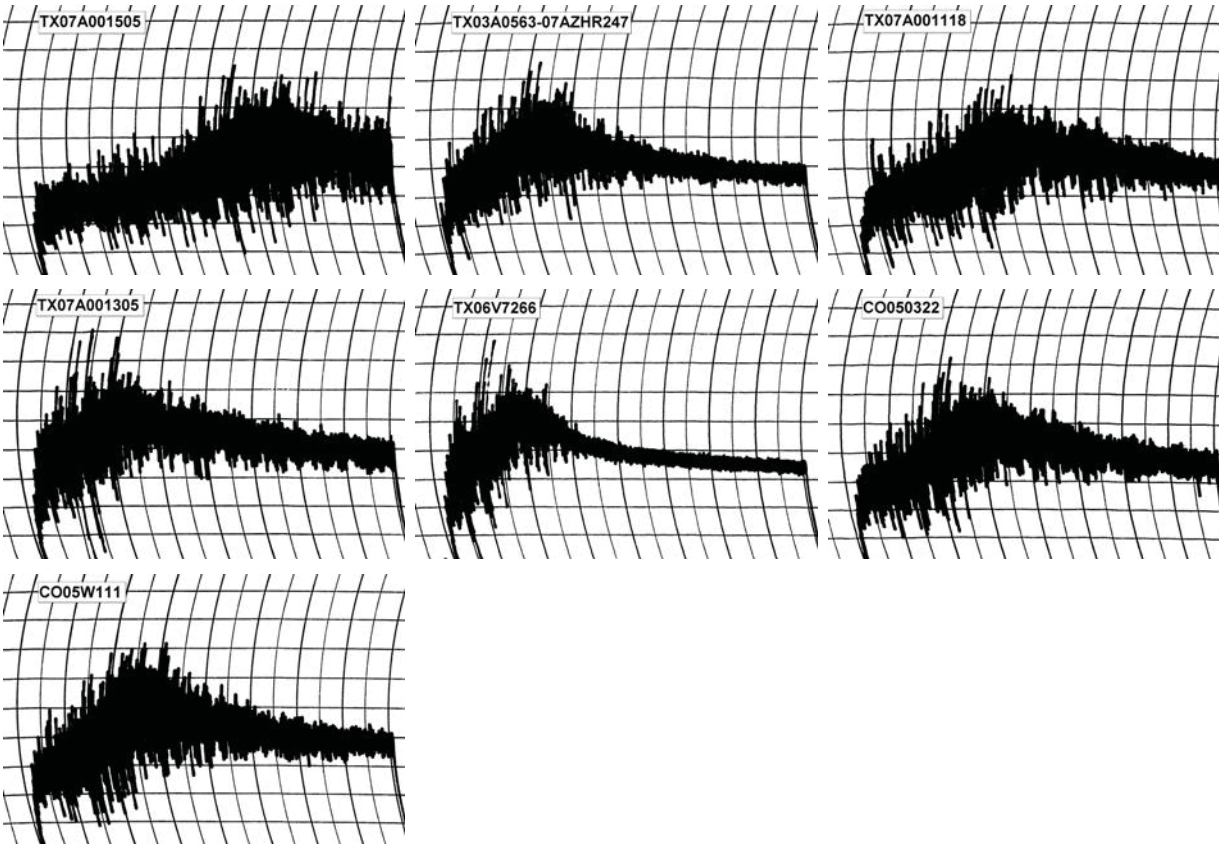
2011 SRPN Intraregional Production Zone

Southern High Plains



2011 SRPN Intraregional Production Zone

Southern High Plains



2011 SRPN Intraregional Production Zone

Southern High Plains

	RVA							
Line	Stirring Number (RVU)	Peak Viscosity (RVU)	Trough Viscosity (RVU)	Breakdown (RVU)	Final Viscosity (RVU)	Set back (RVU)	Peak Time (min)	Pasting Temp (Deg. C)
Kharkof	150.83	223.83	170.50	53.33	284.83	114.33	6.53	87.45
Scout 66	139.50	207.92	158.50	49.42	279.83	121.33	6.27	67.85
TAM-107	154.75	247.75	184.25	63.50	303.75	119.50	6.53	67.70
Fuller	147.75	217.58	170.00	47.58	290.00	120.00	6.47	67.80
Clara CL (KS08HW35-1)	129.50	279.17	190.17	89.00	301.42	111.25	6.47	67.80
Iba (OK07209)	130.83	221.67	168.25	53.42	292.25	124.00	6.33	67.70
Gallagher (OK07214)	144.08	186.58	145.75	40.83	263.08	117.33	6.27	67.05
OK07231	139.33	199.67	150.08	49.58	270.50	120.42	6.27	66.15
OK08328	115.50	260.08	162.67	97.42	276.83	114.17	6.33	68.60
OK07218	122.92	185.25	146.75	38.50	267.08	120.33	6.27	67.80
OK06336	121.42	233.17	174.17	59.00	289.17	115.00	6.53	67.80
KS020822-M-5	130.92	226.25	176.83	49.42	298.83	122.00	6.53	67.75
KS020638-5-1	133.83	268.83	170.92	97.92	278.92	108.00	6.40	66.95
KS020319-7-2	139.83	266.17	173.58	92.58	276.50	102.92	6.40	67.80
KS020319-7-3	134.50	264.25	171.75	92.50	274.83	103.08	6.40	67.00
CO050233-2	153.75	227.50	179.92	47.58	294.67	114.75	6.53	67.75
Denali (CO050303-2)	154.50	205.83	159.33	46.50	278.58	119.25	6.33	69.45
CO050337-2	124.83	195.42	144.17	51.25	268.75	124.58	6.13	68.55
Brawl CL Plus (CO06052)	129.42	219.50	163.33	56.17	282.42	119.08	6.40	67.80
Byrd (CO06424)	125.67	246.33	170.42	75.92	305.00	134.58	6.20	67.80
NE06430	131.00	238.08	168.83	69.25	289.75	120.92	6.40	67.70
NE07444	138.75	212.08	161.58	50.50	282.33	120.75	6.40	67.85
NE06607	133.83	258.92	168.67	90.25	269.42	100.75	6.40	67.75
NI08708	137.08	209.33	158.25	51.08	280.67	122.42	6.33	67.65
TX06A001281	125.92	260.50	150.83	109.67	264.33	113.50	6.33	68.55
TX05V7259	157.42	221.58	179.08	42.50	291.75	112.67	6.60	67.65
TX05A001188	124.33	227.00	165.67	61.33	281.50	115.83	6.47	68.70
TX07A001505	144.50	223.83	172.25	51.58	299.75	127.50	6.40	67.70
TX03A0563-07AZHR247	133.25	180.67	151.67	29.00	273.33	121.67	6.33	67.85
TX07A001118	112.17	232.25	159.33	72.92	280.00	120.67	6.20	67.00
TX07A001305	117.42	225.75	167.33	58.42	293.25	125.92	6.33	67.85
TX06V7266	137.83	221.08	169.17	51.92	294.83	125.67	6.40	68.55
CO050322	127.83	201.92	147.92	54.00	277.17	129.25	6.13	68.60
CO05W111	131.58	216.58	160.25	56.33	286.50	126.25	6.27	67.80

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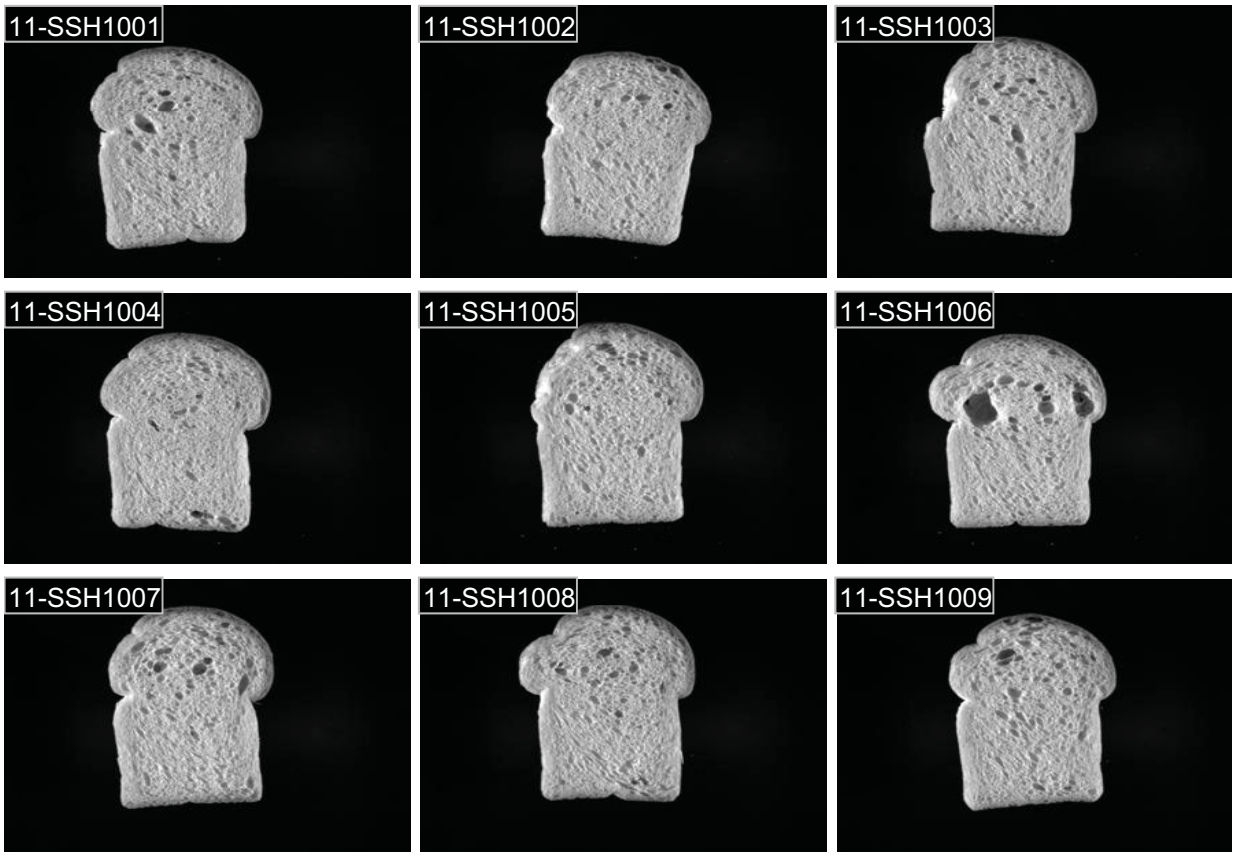
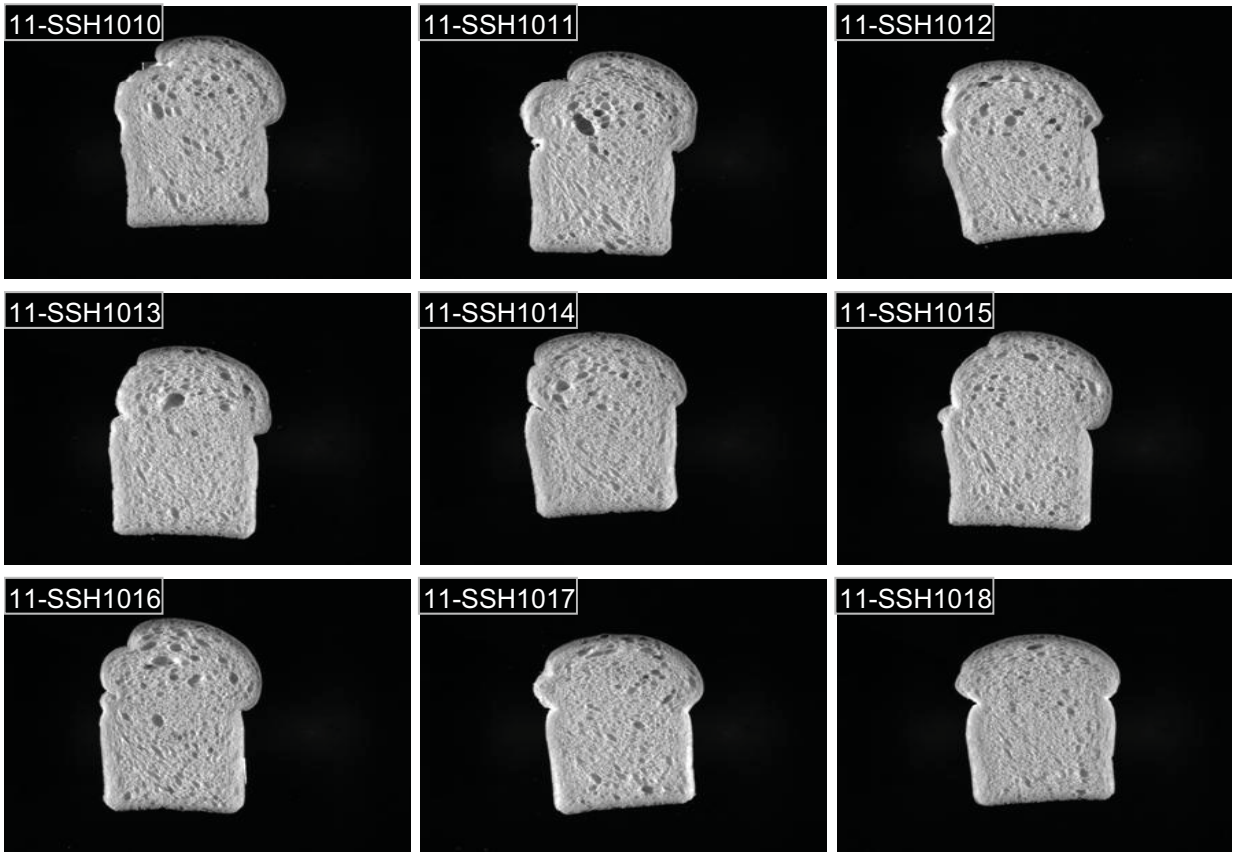
	Flour		Mix Time		Dough					
	Protein	Water Abs.	As-is	Corrected	Weight	Proof Height	Crumb Grain	As-Rec'd.	Specific Volume	Loaf Volume Potential
Line	(%)	(%)	(min)	(min)	(g)	(cm)		(cc)	(cc/g)	(cc/%)
Kharkof	13.7	61.3	3.25	3.25	170.5	7.1	3.0	865	5.8	53
Scout 66	13.2	61.5	2.50	2.50	171.1	7.0	2.8	815	5.3	51
TAM-107	12.1	60.7	2.50	2.50	170.8	6.9	1.5	850	5.7	61
Fuller	12.7	63.0	3.75	3.75	172.1	7.5	3.0	910	6.1	63
Clara CL (KS08HW35-1)	12.7	62.0	3.13	3.13	171.8	7.1	2.0	915	6.2	64
Iba (OK07209)	12.1	61.8	3.25	3.25	171.4	6.8	2.8	850	5.7	60
Gallagher (OK07214)	13.0	62.0	3.50	3.50	171.6	7.4	2.0	900	6.1	60
OK07231	13.0	62.9	3.75	3.75	172.4	7.3	3.5	900	6.1	60
OK08328	11.9	60.8	2.88	2.83	170.5	7.0	1.8	840	5.7	61
OK07218	12.6	61.5	3.13	3.13	171.3	7.0	1.5	850	5.7	57
OK06336	13.4	63.7	3.75	3.75	173.1	7.1	1.5	915	6.1	59
KS020822-M-5	13.8	62.8	2.75	2.75	172.6	6.5	1.0	770	5.1	44
KS020638-5-1	12.9	61.9	2.50	2.50	171.7	7.0	2.0	850	5.7	56
KS020319-7-2	12.8	61.8	2.75	2.75	171.9	6.8	2.0	790	5.2	50
KS020319-7-3	12.6	62.6	2.75	2.75	172.3	7.1	3.0	900	6.0	62
CO050233-2	13.0	61.8	2.88	2.88	171.1	6.8	2.0	875	5.9	58
Denali (CO050303-2)	12.1	62.7	2.25	2.25	172.3	6.8	1.5	775	5.0	52
CO050337-2	12.1	61.6	2.88	2.88	170.9	6.4	2.0	705	4.7	45
Brawl CL Plus (CO06052)	13.2	62.9	3.13	3.13	172.1	7.1	2.8	885	5.8	57
Byrd (CO06424)	11.9	61.3	5.25	5.19	170.5	6.6	1.0	835	5.6	60
NE06430	12.3	63.0	5.00	5.00	172.5	6.7	3.0	820	5.4	56
NE07444	13.2	64.0	4.63	4.63	173.7	7.4	3.5	895	5.9	59
NE06607	12.9	60.1	4.13	4.13	169.7	6.9	2.0	845	5.7	55
NI08708	13.2	61.2	3.75	3.75	171.2	7.5	4.0	950	6.5	64
TX06A001281	13.5	61.6	2.13	2.13	171.4	6.2	0.5	735	4.9	42
TX05V7259	13.3	64.6	4.63	4.63	174.4	7.5	3.5	945	6.4	63
TX05A001188	13.2	63.5	2.88	2.88	172.9	6.4	3.0	800	5.3	49
TX07A001505	12.8	64.5	6.38	6.38	173.9	7.0	4.0	860	5.7	57
TX03A0563-07AZHR247	13.2	61.6	2.50	2.50	171.4	6.6	2.5	820	5.5	51
TX07A001118	12.4	62.3	3.75	3.75	171.2	7.0	2.0	895	6.0	63
TX07A001305	11.5	61.5	2.38	2.23	171.1	6.5	0.5	795	5.3	58
TX06V7266	12.9	60.3	2.00	2.00	170.1	6.8	1.0	735	4.9	44
CO050322	11.7	61.5	3.00	2.89	171.6	7.0	2.5	805	5.3	58
CO05W111	12.1	61.4	2.63	2.63	171.0	6.6	2.5	765	5.0	51

2011 SRPN Intraregional Production Zone

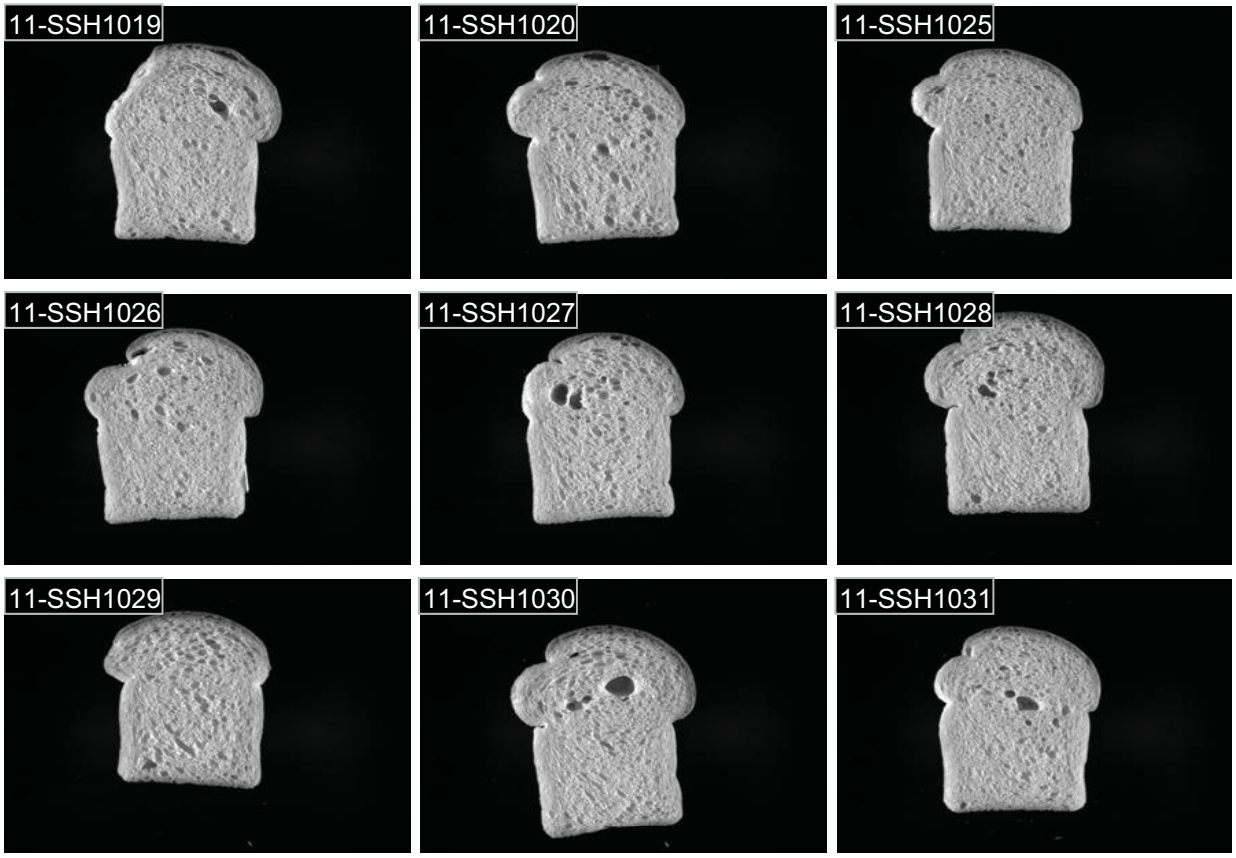
Southern High Plains



2011 SRPN Intraregional Production Zone
Southern High Plains



2011 SRPN Intraregional Production Zone
Southern High Plains



2011 SRPN Intraregional Production Zone
Southern High Plains