

2013 Hard Winter Wheat Regional Performance Nursery Quality Report



Hard Winter Wheat Quality Laboratory

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Hard Winter Wheat Quality Laboratory

About the 2013 Crop ...

Locations from the **NRPN**, and **SRPN** were subdivided into **intra-regional production zones**. The intra-regional 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 with number of samples submitted in the parenthesis were subdivided and variety-composited according to the following zones:

Northern Regional Performance Nursery (NRPN)

North Central Plains (NCP)

Ames, IA (0)
Lincoln, NE (37)
St. Paul, MN (0)
Crookston, MN (37)
Brookings, SD (37)
Dakota Lakes/ (Pierre), SD (37)
Winner, SD (37)

Northern Plains (NP)

Minot, ND (37)
NDSU, ND (37)
Westbred, ND (37)
Bozeman, MT (37)
Moccasin, MT (37)
Williston, ND (37)

Northern High Plains (NHP)

Alliance, NE (0)
Archer, WY (0)
Sidney, NE (0)
Wichita, KS (37)

Southern Regional Performance Nursery (SRPN)

North Central Plains (NCP)

Crawfordsville, IA (0)
Clay center, NE (43)
Lincoln, NE (43),
Salina, KS (0)
Manhattan, KS (0)
Brookings, SD (43)
Dakota Lakes/ (Pierre), SD (43)
Winner, SD (43)

Northern High Plains (NHP)

Colby, KS (0)
Julesburg, CO (43)
North Platte, NE (0)
Alliance, NE (0)
Archer, WY (0)
Sidney, NE (0)
Arkon, CO (43)
Burlington, CO (0)
Ft. Collins, CO (43)
Farmington, NM (43)

South Central Plains (SCP)

Bushland-irr, TX (0)
Goodwell-irr, OK (43)
Hays, KS (43)
Hutchison, KS (0)
Haven/Windfield, KS (0)
Lahoma, OK (0)
Wichita, KS (43)
Granite/Hobart, OK (dropped out due to infection)
Chillicothe, TX (43)
Dallas/Prosper, TX (0)
Stillwater, OK (43)

Southern High Plains (SHP)

Bushland-dry, TX (0)
Clovis-dry, NM (0)
Clovis-irr, NM (0)
Garden City, KS (43)
Walsh/Springfield, CO (0)

HWWQL Laboratory Analyses

About the HWWQL Quality Data ...

Milling, flour chemical, physical dough, breadmaking, noodlemaking properties and flour protein analysis of 2013 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

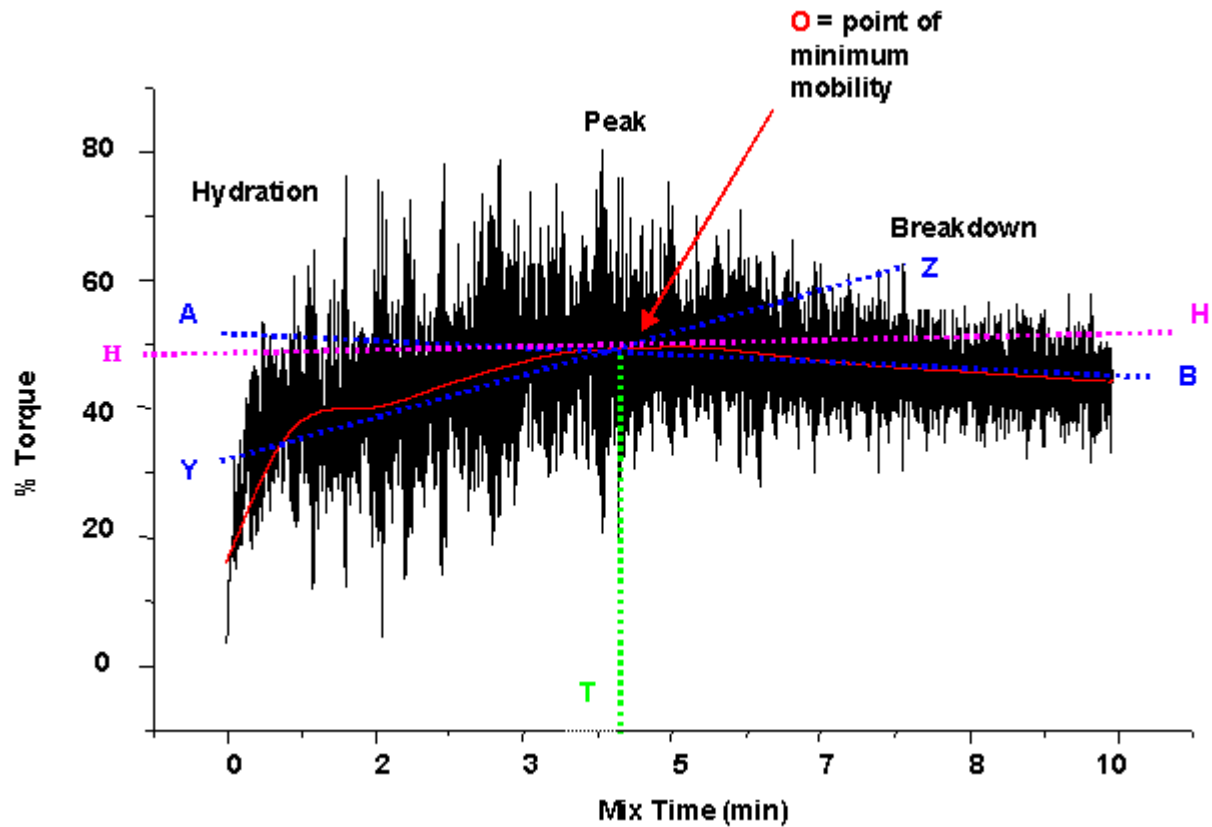
- Ash (FA) = flour ash content (%) on 14% mb. (AACC Method 08-01)
- Protein (FP) = flour protein content (%) on 14% mb. (AACC Method 46-30 or 39-11)
- Color (dry flour) = Minolta method
- PPO = polyphenol oxidase activity defined as a change of 0.001 absorbance unit (AU)/min/mL

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).

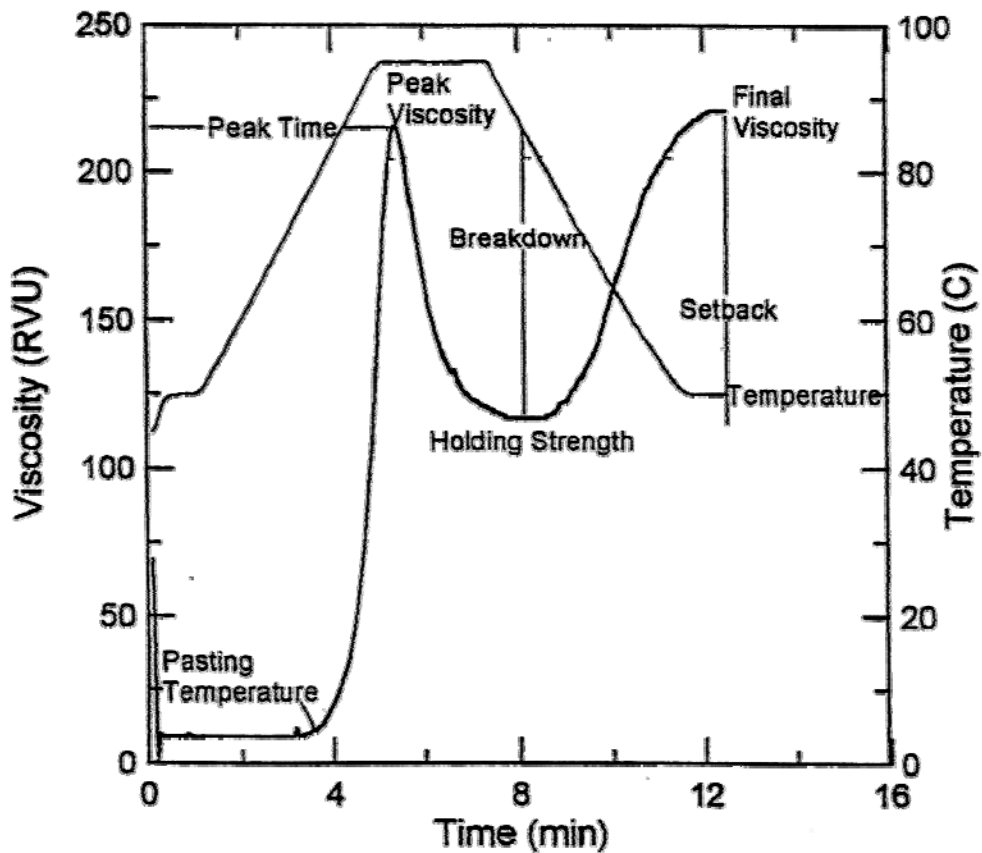
Mixogram Curve



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 °C.
 - Peak temperature = temperature at which the peak viscosity occurred, in °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. Sam Rice; Lou Heaton, Ph.D.

Bake Lab: 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. and Louis Heaton, Ph.D.

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

2013 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	Lyman	Lyman	check
6	N10MD2020	N02Y5202/Wesley//OK98699	ARS-LNK
7	N10MD2073	N02Y5202/Wesley//OK98699	ARS-LNK
8	NX10MD2216	NY91017-8080/4/BaiHuo/Kanto107//Ike /3/SD94217W/5/NWX03Y2064	ARS-LNK
9	NX10MD2300	(BaiHuo/Kanto107//Ike/3/SD94217)/(BaiHuo/Kanto107//Ike/3/96MD7413-10/	ARS-LNK
10	NI07703	R-148 (G97343) =(919021/B725//K92)/NI00436 =(WI89-273-13/NE93427 (=	UNL
11	NI09710H	NH01023/W97-234	UNL
12	NI10712	CO99314/OK00611W	UNL
13	NI10718W	SD97W609=(Abilene/Karl)/Anton	UNL
14	NE10418	OK99212/Overland	UNL
15	NE10442	EXPEDITION/NE97689//KS02HW30	UNL
16	NE10589	OK98697/Jagalene//Camelot	UNL
17	NH10665	NI02402/NH01031//Infinity CL	UNL
18	NW10487	NuHills 10005/NW99L7171	UNL
19	NHH11569	NH01048/TEAL//NH01036	UNL
20	NE08499	CDL 91185-1/NE99469 (=NE97V106/NE88588//KARL 92)	UNL
21	NHH09655	SADOVO552/NH01031//TEAL	UNL
22	LCH10-13	00F5--58-3 (Bulk Selection)/Stanof	Limgrain Cereal Seeds
23	LCH08-80	S.6742/92PAN1#33 //92PIN#107	Limgrain Cereal Seeds
24	LCH08-109	RECITAL/AGRI PRO CHARTER (AGRI PRO W96-410) //92PAN1#33 (W2424	Limgrain Cereal Seeds
25	SD06158	Wesley/CDC Falcon	SDSU
26	SD07165	SD97250/SD99W006//Avalanche	SDSU
27	SD07184	Expedition/SD97W650//KS00H10-32-1-1	SDSU
28	SD08080	SD97059-2/G980723	SDSU
29	SD08200	Wesley/KS91048-L-2-1//NE93613/Wendy	SDSU
30	SD09118	Wesley/Ning7840//SD97380-2/Wendy	SDSU
31	SD09138	SD92107-5/OK94P549-99-6704//Jagalene/Wendy	SDSU
32	SD09192	Harding/Trego//Trego/Wendy	SDSU
33	SD10026-2	Overland/Overley	SDSU
34	SD10257-2	Ransom/SD96240-3-1	SDSU
35	BL11002	Lakin/Ok102	Bayer CropScience LP
36	MT08172	MT9982*2/BZ9W96-895	Montana State
37	MT0978	MT9982//MTW0072/NW97S151	Montana State



Hard Winter Wheat Quality Report 2013 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	44.7	Poor	79.4	59.3	Very Good	93.0		6,16,
Overland	54.5	Very Good	96.7	26.6	Very Poor	41.8		12,16,17,18,19,20,21,
Wesley	55.3	Very Good	98.2	52.7	Good	82.7		14,
Jerry	49.3	Average	87.5	45.6	Average	71.6		
Lyman	54.4	Very Good	96.5	45.1	Average	70.7	1AL	16,
N10MD2020	47.4	Poor	84.2	38.6	Very Poor	60.6		14,
N10MD2073	43.6	Very Poor	77.4	51.3	Good	80.4		2,4,16,20,
NX10MD2216	41.6	Very Poor	73.8	43.8	Average	68.7		8,16,21,
NX10MD2300	42.7	Very Poor	75.8	56.7	Good	88.9		8,9,10,21,
NI07703	44.3	Poor	78.6	42.5	Poor	66.7	1BL	1,
NI09710H	45.6	Poor	81.0	31.9	Very Poor	50.1		1,16,
NI10712	42.4	Very Poor	75.3	56.7	Very Good	88.9		14,
NI10718W	49.7	Average	88.2	34.9	Very Poor	54.7		11,14,
NE10418	46.9	Poor	83.3	62.9	Very Good	98.7		3,
NE10442	49.8	Average	88.4	50.8	Average	79.7		
NE10589	46.9	Poor	83.2	39.4	Poor	61.9		13,
NH10665	50.5	Good	89.8	35.2	Very Poor	55.2		11,12,18,
NW10487	40.8	Very Poor	72.5	42.8	Poor	67.1		
NHH11569	52.9	Good	93.9	55.5	Very Good	87.1		5,16,18,
NE08499	51.2	Good	90.8	56.0	Good	87.9		
NHH09655	49.4	Average	87.7	37.4	Very Poor	58.6		16,
LCH10-13	56.3	Very Good	100.0	47.8	Average	75.0		
LCS Wizard	46.4	Poor	82.4	42.9	Poor	67.3		2,4,16,
LCH08-109	42.0	Very Poor	74.6	51.6	Good	81.0		4,
Redfield	48.7	Average	86.4	40.8	Poor	64.0		
SD07165	49.2	Average	87.3	35.3	Very Poor	55.4		14,
SD07184	49.0	Average	87.0	61.7	Very Good	96.9		
SD08080	51.5	Good	91.5	63.7	Very Good	100.0		
SD08200	52.3	Good	92.8	51.2	Average	80.3		14,15,
SD09118	52.6	Good	93.4	40.3	Poor	63.3		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.



Hard Winter Wheat Quality Report 2013 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
SD09138	54.7	Very Good	97.1	42.9	Average	67.3		16,
SD09192	52.6	Good	93.5	53.6	Good	84.2	1AL	10,14,
SD10026-2	53.1	Very Good	94.3	43.7	Poor	68.5		
SD10257-2	55.8	Very Good	99.1	27.7	Very Poor	43.5		3,5,15,16,19,20,21,
BL11002	48.4	Average	85.9	62.3	Very Good	97.7		
MT08172	41.8	Very Poor	74.2	55.4	Good	86.8		1,14,15,
MT0978	43.6	Very Poor	77.5	51.6	Average	81.0		2,9,10,

2013 NRPN Intraregional Production Zone

North Central Plains

LINE	Wt/Bu (lb)	SKCS Average Kernel						Hardness			
		Moisture		Weight		Diameter		SKCS	Class	Distribution	
		(%)	(sd)	(mg)	(sd)	(mm)	(sd)				
								(sd)			
Kharkof	59.3	13.7	0.5	27.8	6.6	2.54	0.29	39 20	MIXED	42--25--17--16--03	
Overland	59.4	13.7	0.4	28.6	8.1	2.58	0.32	62 18	HARD	03--16--28--53--01	
Wesley	57.6	13.6	0.4	31.1	8.5	2.67	0.34	60 17	HARD	04--17--28--51--01	
Jerry	57.6	13.7	0.5	30.7	8.6	2.59	0.35	52 20	MIXED	16--20--27--37--03	
Lyman	59.6	13.4	0.4	30.3	8.2	2.62	0.33	66 17	HARD	03--09--25--63--01	
N10MD2020	58.4	13.1	0.5	25.6	7.2	2.50	0.31	56 19	MIXED	12--21--26--41--03	
N10MD2073	57.5	13.0	0.5	24.5	7.4	2.45	0.30	55 21	MIXED	15--19--24--42--03	
NX10MD2216	56.2	13.6	0.4	27.0	7.7	2.53	0.30	63 17	HARD	04--11--26--59--01	
NX10MD2300	57.8	13.2	0.4	28.3	7.4	2.62	0.31	62 17	HARD	03--10--31--56--01	
NI07703	54.7	13.0	0.4	25.5	7.6	2.61	0.32	74 19	HARD	01--05--16--78--01	
NI09710H	54.5	13.5	0.4	28.9	8.5	2.61	0.33	55 18	MIXED	11--18--32--39--03	
NI10712	55.5	13.8	0.5	25.2	6.8	2.52	0.30	61 21	HARD	09--14--23--54--02	
NI10718W	56.9	13.3	0.4	29.4	8.4	2.61	0.33	61 17	HARD	05--12--33--50--01	
NE10418	58.0	12.8	0.5	28.8	8.9	2.60	0.35	57 18	HARD	10--18--27--45--02	
NE10442	58.3	13.0	0.4	27.8	7.7	2.60	0.33	71 17	HARD	02--07--16--75--01	
NE10589	57.8	12.7	0.5	26.8	7.5	2.55	0.31	66 21	HARD	05--12--23--60--01	
NH10665	58.3	12.6	0.5	28.3	8.2	2.62	0.35	56 20	MIXED	13--16--24--47--03	
NW10487	56.2	12.8	0.5	25.9	7.7	2.48	0.31	57 21	MIXED	12--17--28--43--03	
NHH11569	58.4	12.5	0.5	32.8	8.9	2.74	0.37	48 20	MIXED	27--22--22--29--03	
NE08499	58.0	12.9	0.5	27.5	7.3	2.53	0.30	58 18	HARD	08--16--26--50--02	
NHH09655	56.9	13.3	0.5	27.0	7.7	2.54	0.34	62 18	HARD	07--13--21--59--02	
LCH10-13	61.0	13.1	0.5	30.7	6.9	2.60	0.28	54 17	MIXED	11--19--32--38--03	
LCH08-80	56.4	13.1	0.4	24.5	7.0	2.45	0.31	64 18	HARD	03--12--25--60--01	
LCH08-109	55.4	13.0	0.5	25.1	7.8	2.45	0.30	55 20	MIXED	13--23--21--43--03	
SD06158	58.0	13.1	0.4	27.0	7.8	2.51	0.32	58 19	HARD	09--18--27--46--02	
SD07165	58.0	12.8	0.5	26.4	7.2	2.51	0.30	58 18	HARD	08--19--27--46--02	
SD07184	58.3	12.8	0.6	29.7	7.9	2.64	0.34	48 19	MIXED	19--27--24--30--03	
SD08080	58.6	13.0	0.4	29.0	7.4	2.59	0.35	55 18	MIXED	12--16--32--40--03	
SD08200	59.1	12.9	0.4	29.7	8.5	2.62	0.34	61 18	HARD	04--16--27--53--01	
SD09118	58.9	13.1	0.4	28.9	8.1	2.60	0.34	62 18	HARD	04--14--24--58--01	
SD09138	58.7	13.3	0.5	28.8	8.1	2.58	0.34	68 17	HARD	03--08--19--70--01	
SD09192	58.6	13.0	0.4	31.7	8.7	2.66	0.32	68 18	HARD	04--08--17--71--01	
SD10026-2	58.3	12.7	0.4	26.8	7.5	2.54	0.29	66 18	HARD	04--09--22--65--01	
SD10257-2	59.8	13.0	0.5	32.3	9.7	2.76	0.37	64 18	HARD	04--09--30--57--01	
BL11002	57.4	13.1	0.5	28.2	7.9	2.60	0.32	63 18	HARD	03--14--28--55--01	
MT08172	54.5	13.2	0.6	26.6	8.6	2.56	0.33	71 19	HARD	02--08--12--78--01	
MT0978	55.7	12.9	0.4	24.7	7.1	2.48	0.31	75 21	HARD	02--06--12--80--01	

2013 NRPN Intraregional Production Zone

North Central Plains

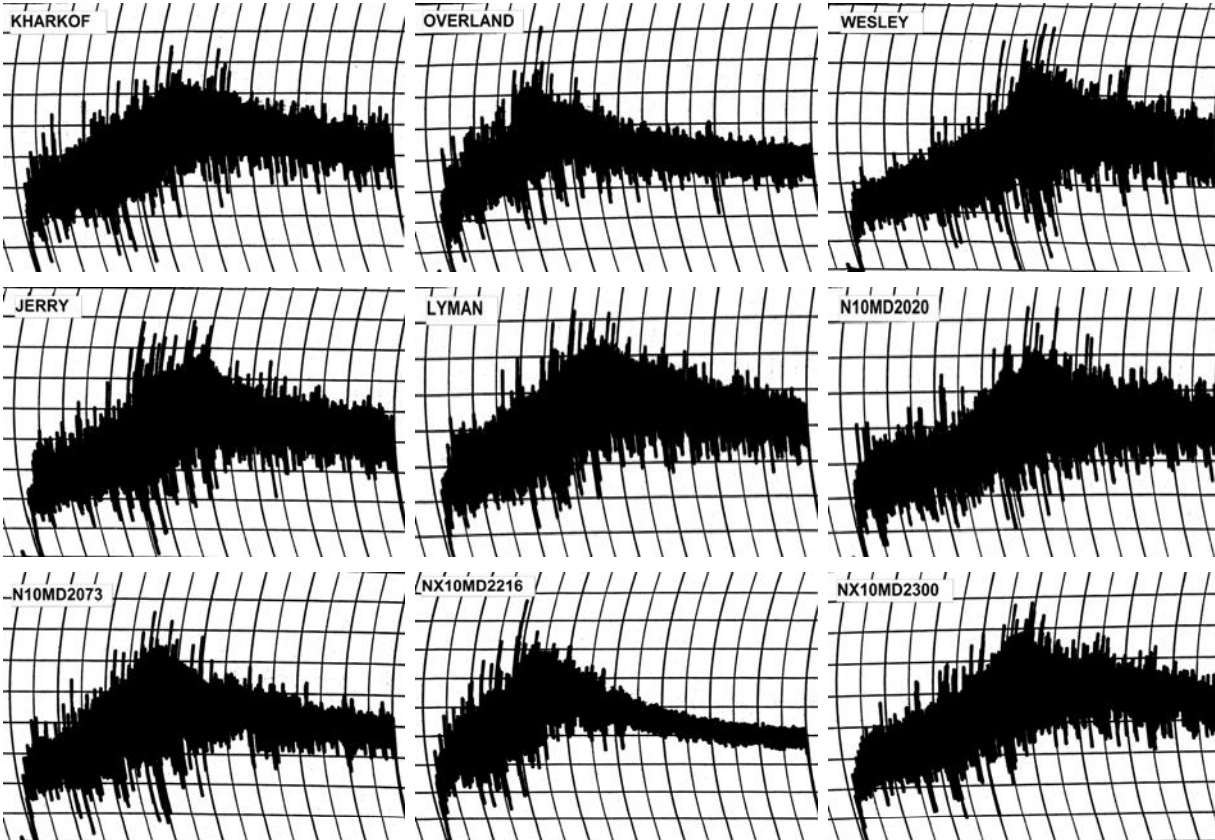
LINE	Wheat		Flour			Noodle Color					
	Protein	Milling Yield	Ash	Protein	PPO	L @ 0	a @ 0	b @ 0	Delta L 24 hrs	Delta a 24 hrs	Delta b 24 hrs
	(%)	(%)	(%)	(%)							
Kharkof	15.4	66.9	0.47	13.9	0.692	80.70	-2.37	22.71	-10.73	1.46	1.15
Overland	13.7	71.1	0.49	12.2	0.680	79.83	-2.16	23.40	-11.60	1.68	-0.48
Wesley	14.3	71.7	0.48	13.3	0.739	80.51	-2.03	20.96	-11.81	1.53	1.90
Jerry	14.0	70.4	0.48	12.9	0.719	80.29	-2.33	24.90	-12.95	1.58	1.28
Lyman	14.6	69.7	0.50	13.2	0.692	81.04	-2.56	23.95	-11.58	1.59	2.68
N10MD2020	14.2	67.6	0.45	13.5	0.814	81.28	-2.22	20.84	-11.74	1.44	1.53
N10MD2073	14.9	67.7	0.47	13.9	0.769	81.43	-2.21	20.90	-13.57	1.62	1.66
NX10MD2216	13.6	63.8	0.47	12.7	0.640	83.01	-2.18	20.85	-16.69	1.32	5.59
NX10MD2300	14.9	64.5	0.55	13.8	0.828	83.36	-1.81	19.11	-19.20	1.60	5.24
NI07703	13.9	66.8	0.49	12.6	0.661	80.92	-2.18	22.34	-13.17	1.44	3.14
NI09710H	13.4	68.3	0.43	12.2	0.729	80.21	-2.39	23.74	-11.09	1.58	2.05
NI10712	14.3	66.4	0.48	12.9	0.761	81.22	-2.62	24.26	-11.36	1.36	1.46
NI10718W	13.0	69.2	0.49	11.8	0.682	82.36	-2.33	21.51	-11.53	1.33	2.96
NE10418	14.1	67.2	0.42	12.8	0.691	80.52	-2.01	22.33	-11.85	0.81	1.75
NE10442	13.9	66.8	0.46	12.7	0.677	81.87	-1.67	19.27	-13.02	0.96	3.40
NE10589	13.5	68.2	0.50	12.4	0.690	79.58	-2.39	24.87	-10.01	1.62	-0.28
NH10665	13.4	70.9	0.48	11.9	0.699	79.81	-2.29	22.99	-10.28	1.34	0.75
NW10487	14.2	66.8	0.51	13.0	0.747	80.75	-2.37	23.22	-12.86	1.39	0.98
NHH11569	14.3	71.2	0.43	12.7	0.635	80.63	-1.76	20.97	-14.78	1.59	2.57
NE08499	13.9	69.6	0.48	12.7	0.821	80.52	-1.99	22.31	-14.25	2.07	2.21
NHH09655	13.7	69.1	0.45	12.4	0.746	79.24	-2.34	25.09	-12.86	2.51	0.43
LCH10-13	13.9	69.2	0.44	12.5	0.708	81.59	-1.85	19.88	-14.32	1.68	2.85
LCH08-80	13.7	68.1	0.49	12.5	0.719	80.80	-2.38	24.13	-11.27	1.49	0.48
LCH08-109	13.5	67.8	0.47	12.3	0.687	81.97	-2.06	22.62	-12.81	1.46	2.77
SD06158	13.9	68.6	0.46	13.1	0.656	81.29	-2.33	21.10	-11.81	1.57	1.68
SD07165	13.5	68.6	0.47	12.3	0.716	81.56	-2.69	23.13	-12.58	1.78	2.27
SD07184	14.0	68.1	0.40	13.0	0.772	83.23	-2.47	20.31	-12.10	1.29	2.53
SD08080	14.3	69.1	0.44	13.0	0.670	81.71	-1.67	19.98	-10.64	1.02	1.10
SD08200	13.9	68.9	0.43	12.2	0.759	82.58	-2.38	22.06	-10.34	1.54	-0.05
SD09118	13.8	69.3	0.46	12.2	0.726	80.93	-2.07	21.88	-11.43	1.58	1.63
SD09138	14.0	70.8	0.50	12.4	0.712	79.54	-2.19	23.82	-12.15	2.66	-1.15
SD09192	14.1	69.4	0.52	12.6	0.697	80.80	-2.14	21.20	-14.40	2.09	1.77
SD10026-2	14.1	69.9	0.47	12.5	0.698	80.81	-2.30	24.34	-15.09	2.46	0.04
SD10257-2	13.8	70.6	0.44	12.5	0.587	80.04	-1.80	21.75	-12.70	2.14	0.63
BL11002	13.7	67.9	0.47	12.6	0.334	81.84	-2.26	23.13	-11.80	1.08	2.77
MT08172	14.8	66.2	0.50	13.5	0.685	80.86	-1.32	19.39	-15.05	1.24	4.97
MT0978	14.9	67.7	0.57	13.6	0.327	78.84	-1.75	23.89	-11.18	1.54	2.30

2013 NRPN Intraregional Production Zone

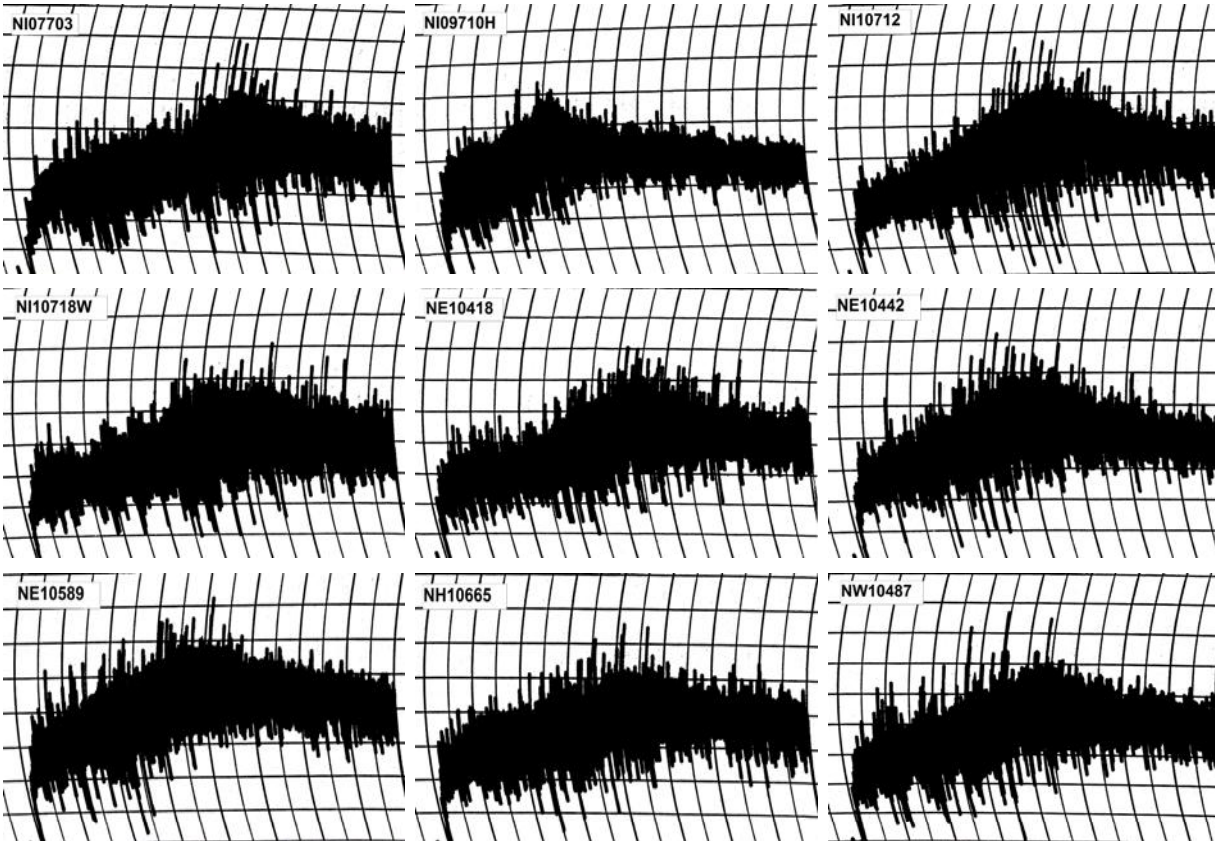
North Central Plains

	Flour Protein	Mixograph			
		Absorption	As-Is	Corrected	Tolerance
Line	(%)	(%)	(min)	(min)	
Kharkof	13.9	64.1	3.50	3.50	2
Overland	12.2	61.8	2.38	2.38	1
Wesley	13.3	63.5	4.38	4.38	4
Jerry	12.9	64.4	3.88	3.88	3
Lyman	13.2	64.0	3.63	3.63	2
N10MD2020	13.5	64.9	4.13	4.13	4
N10MD2073	13.9	65.5	3.00	3.00	2
NX10MD2216	12.7	68.1	2.38	2.38	0
NX10MD2300	13.8	69.0	4.00	4.00	3
NI07703	12.6	64.0	4.88	4.88	4
NI09710H	12.2	63.3	2.63	2.63	2
NI10712	12.9	63.4	4.50	4.50	4
NI10718W	11.8	61.6	4.50	4.39	5
NE10418	12.8	64.3	4.50	4.50	4
NE10442	12.7	64.1	3.88	3.88	4
NE10589	12.4	60.6	3.75	3.75	4
NH10665	11.9	61.4	4.50	4.47	4
NW10487	13.0	62.1	4.38	4.38	4
NHH11569	12.7	63.2	3.63	3.63	2
NE08499	12.7	63.2	4.38	4.38	4
NHH09655	12.4	63.7	2.63	2.63	2
LCH10-13	12.5	63.7	4.00	4.00	4
LCH08-80	12.5	63.8	2.63	2.63	2
LCH08-109	12.3	62.4	4.13	4.13	4
SD06158	13.1	63.7	4.38	4.38	4
SD07165	12.3	62.4	5.13	5.13	4
SD07184	13.0	63.6	4.50	4.50	4
SD08080	13.0	63.6	3.75	3.75	4
SD08200	12.2	62.3	5.50	5.50	4
SD09118	12.2	63.2	2.50	2.50	2
SD09138	12.4	63.6	2.75	2.75	2
SD09192	12.6	62.9	5.25	5.25	4
SD10026-2	12.5	62.7	3.88	3.88	4
SD10257-2	12.5	63.3	2.00	2.00	1
BL11002	12.6	62.4	3.88	3.88	4
MT08172	13.5	65.4	9.50	9.50	5
MT0978	13.6	64.6	3.75	3.75	3

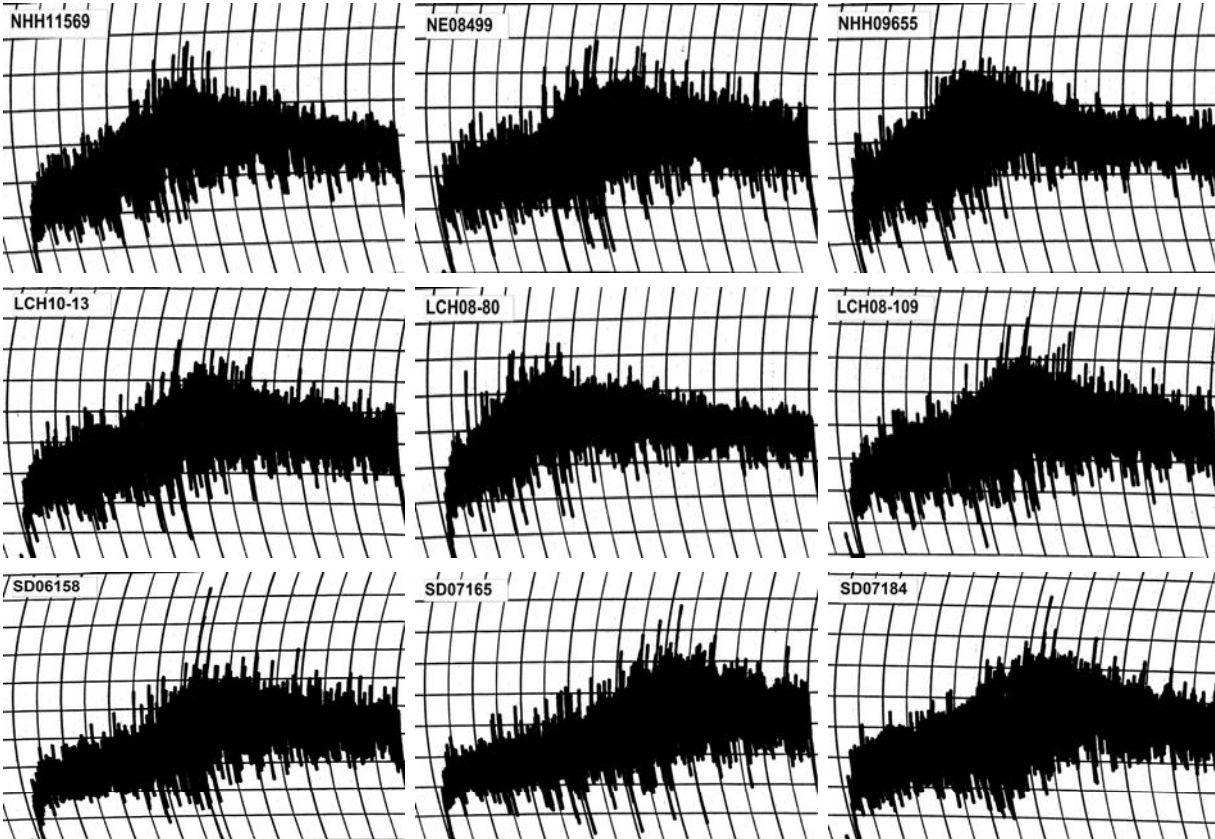
2013 NRPN Intraregional Production Zone North Central Plains



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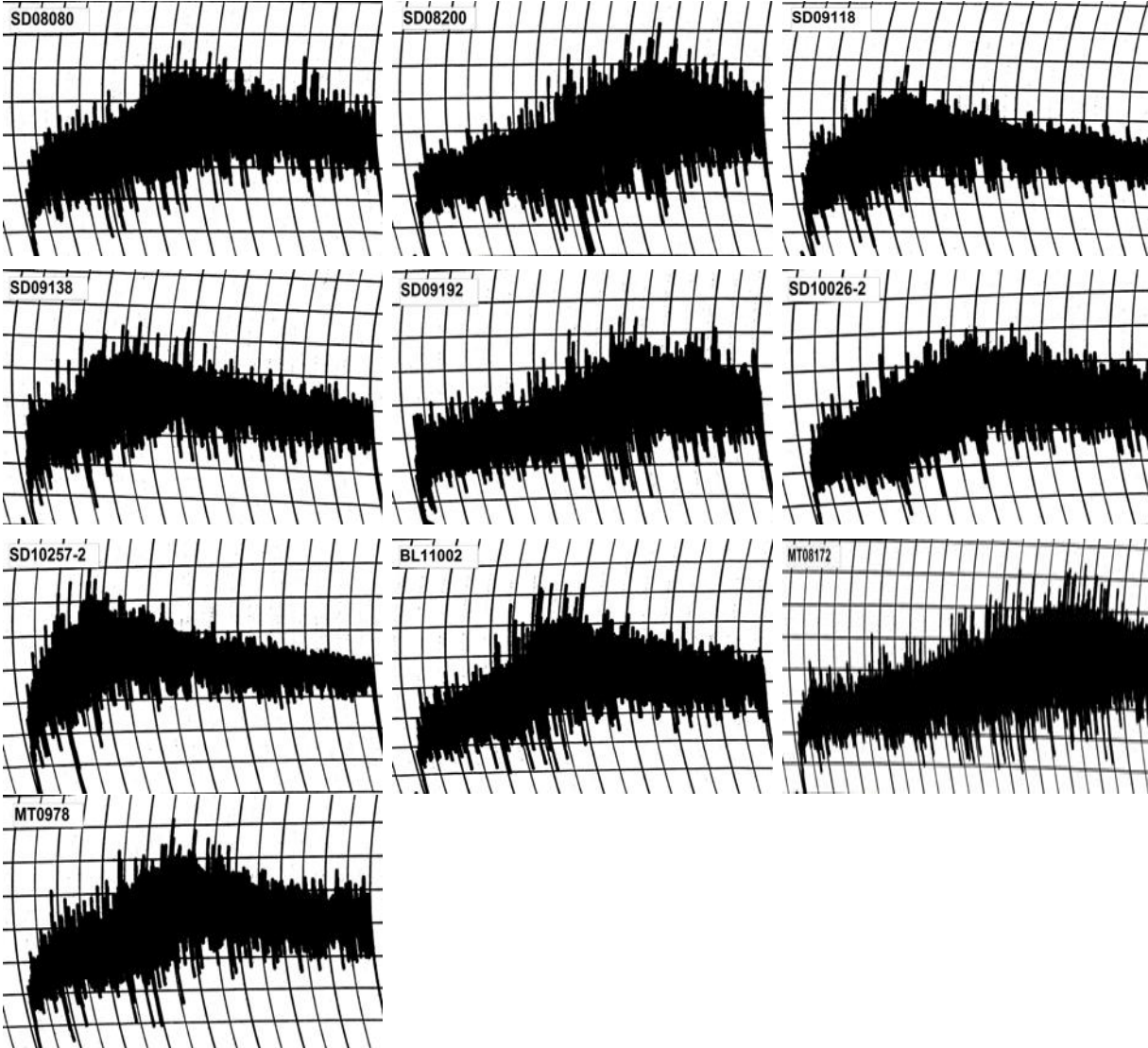


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2013 NRPN Intraregional Production Zone

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North Central Plains

Line	RVA						
	Stirring Number (RVU)	Peak Viscosity (RVU)	Trough Viscosity (RVU)	Breakdown (RVU)	Final Viscosity (RVU)	Set back (RVU)	Peak Time (min)
Kharkof	143.25	243.25	166.42	76.83	269.33	102.92	6.40
Overland	108.25	222.00	147.17	74.83	254.17	107.00	6.20
Wesley	113.75	213.92	140.58	73.33	253.42	112.83	6.20
Jerry	112.08	183.33	126.75	56.58	219.00	92.25	6.27
Lyman	120.00	176.50	120.67	55.83	215.25	94.58	6.13
N10MD2020	150.25	236.33	154.58	81.75	248.08	93.50	6.40
N10MD2073	141.17	239.00	159.42	79.58	263.75	104.33	6.33
NX10MD2216	82.75	130.25	59.17	71.08	86.83	27.67	3.73
NX10MD2300	107.42	180.42	78.58	101.83	114.25	35.67	3.80
NI07703	127.50	210.08	141.83	68.25	254.67	112.83	6.27
NI09710H	127.08	219.42	139.67	79.75	252.08	112.42	6.13
NI10712	108.58	246.92	157.25	89.67	280.83	123.58	6.20
NI10718W	117.00	185.25	105.50	79.75	201.33	95.83	6.00
NE10418	139.83	257.42	166.25	91.17	267.42	101.17	6.47
NE10442	131.25	200.08	141.00	59.08	255.00	114.00	6.20
NE10589	121.67	219.58	149.58	70.00	264.00	114.42	6.20
NH10665	146.83	238.83	168.67	70.17	281.92	113.25	6.40
NW10487	111.33	155.08	90.83	64.25	176.75	85.92	5.93
NHH11569	140.25	222.75	162.25	60.50	274.08	111.83	6.33
NE08499	125.00	224.00	148.92	75.08	257.17	108.25	6.20
NHH09655	128.00	211.58	137.83	73.75	242.25	104.42	6.20
LCH10-13	153.25	252.42	177.42	75.00	291.67	114.25	6.47
LCH08-80	120.33	251.58	153.92	97.67	269.75	115.83	6.27
LCH08-109	101.17	211.25	134.17	77.08	239.67	105.50	6.20
SD06158	137.25	221.75	156.92	64.83	276.17	119.25	6.27
SD07165	145.92	259.00	169.67	89.33	280.50	110.83	6.40
SD07184	142.33	236.75	157.42	79.33	267.17	109.75	6.33
SD08080	133.58	233.17	156.75	76.42	266.92	110.17	6.27
SD08200	131.08	220.58	147.75	72.83	266.42	118.67	6.20
SD09118	122.00	227.42	150.17	77.25	262.92	112.75	6.20
SD09138	112.58	222.42	150.83	71.58	269.00	118.17	6.20
SD09192	127.17	240.92	161.67	79.25	278.50	116.83	6.33
SD10026-2	124.92	225.67	149.58	76.08	261.33	111.75	6.20
SD10257-2	124.83	225.42	151.50	73.92	268.50	117.00	6.20
BL11002	117.50	240.08	148.58	91.50	258.67	110.08	6.20
MT08172	137.50	236.83	153.33	83.50	269.67	116.33	6.27
MT0978	122.08	236.92	152.08	84.83	263.42	111.33	6.27

2013 NRPN Intraregional Production Zone

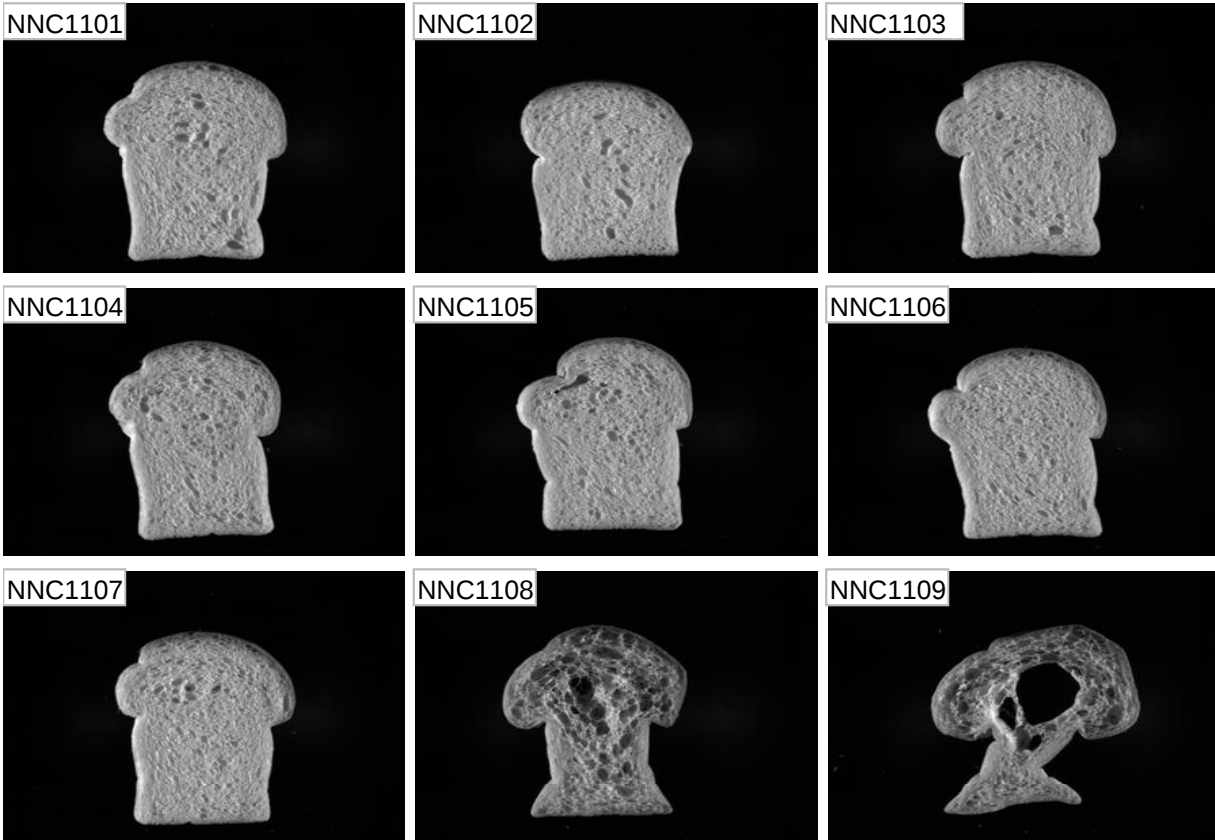
North Central Plains

Line	Flour		Mix Time		Dough					
	Protein	Water Abs.	As-is	Corrected	Weight	Proof Height	Crumb Grain	As-Rec'd.	Specific Volume	Loaf Volume Potential
	(%)	(%)	(min)	(min)	(g)	(cm)		(cc)	(cc/g)	(cc/%)
Kharkof	13.9	64.8	5.50	5.50	173.2	7.5	4.0	925	6.1	57
Overland	12.2	57.9	3.00	3.00	167.4	6.8	2.0	800	5.4	54
Wesley	13.3	64.5	7.75	7.75	172.8	7.5	4.0	930	6.2	61
Jerry	12.9	64.4	5.00	5.00	172.9	7.3	3.5	910	6.0	62
Lyman	13.2	64.0	5.00	5.00	173.2	7.3	3.5	930	6.2	61
N10MD2020	13.5	65.1	7.50	7.50	174.3	7.3	4.5	905	6.0	58
N10MD2073	13.9	63.6	4.50	4.50	172.2	7.3	3.0	900	6.0	55
NX10MD2216	12.7	65.5	2.88	2.88	175.5	7.4	0.0	1035	6.9	76
NX10MD2300	13.8	68.7	6.25	6.25	177.2	7.8	0.0	1075	7.2	72
NI07703	12.6	64.9	6.00	6.00	174.1	7.1	2.5	935	6.3	66
NI09710H	12.2	60.9	3.50	3.50	169.7	7.0	2.5	875	5.9	62
NI10712	12.9	64.8	7.25	7.25	173.8	7.4	4.0	975	6.6	68
NI10718W	11.8	62.9	8.13	7.93	171.2	7.2	3.5	930	6.4	72
NE10418	12.8	65.1	6.50	6.50	173.7	7.4	4.0	1040	7.0	75
NE10442	12.7	64.0	5.00	5.00	172.9	7.5	4.5	995	6.7	72
NE10589	12.4	59.8	5.25	5.25	169.7	7.2	2.5	895	6.1	63
NH10665	11.9	59.2	5.25	5.21	169.8	6.9	3.5	865	5.8	63
NW10487	13.0	63.7	5.75	5.75	172.7	7.5	4.5	925	6.1	62
NHH11569	12.7	64.2	4.75	4.75	173.4	6.9	4.0	865	5.6	58
NE08499	12.7	62.9	6.50	6.50	172.3	7.4	4.0	950	6.4	67
NHH09655	12.4	61.9	3.88	3.88	171.0	7.5	3.5	925	6.3	66
LCH10-13	12.5	63.1	5.50	5.50	172.7	7.5	4.5	995	6.7	73
LCH08-80	12.5	59.9	3.00	3.00	169.3	7.3	3.0	930	6.4	66
LCH08-109	12.3	61.8	7.00	7.00	171.5	7.1	4.0	915	6.2	66
SD06158	13.1	63.7	6.75	6.75	172.7	7.2	4.5	940	6.4	64
SD07165	12.3	62.8	7.50	7.50	172.0	7.3	3.5	945	6.5	69
SD07184	13.0	62.9	7.00	7.00	172.8	7.3	5.0	995	6.7	70
SD08080	13.0	62.9	4.38	4.38	172.9	7.5	4.0	1000	6.7	70
SD08200	12.2	61.7	8.63	8.63	170.5	7.2	5.0	935	6.4	69
SD09118	12.2	60.6	3.38	3.38	170.1	7.0	3.0	860	5.8	61
SD09138	12.4	61.1	3.38	3.38	170.8	7.1	3.0	890	6.0	63
SD09192	12.6	62.1	7.75	7.75	171.9	7.5	4.0	1035	6.9	77
SD10026-2	12.5	62.1	5.50	5.50	171.2	7.3	3.5	940	6.4	67
SD10257-2	12.5	60.2	2.63	2.63	170.1	7.0	2.0	810	5.5	54
BL11002	12.6	61.8	4.88	4.88	170.7	7.4	4.0	975	6.6	71
MT08172	13.5	64.7	11.50	11.50	173.4	7.5	4.0	1020	6.9	69
MT0978	13.6	64.9	5.00	5.00	175.1	7.6	3.5	1000	6.7	66

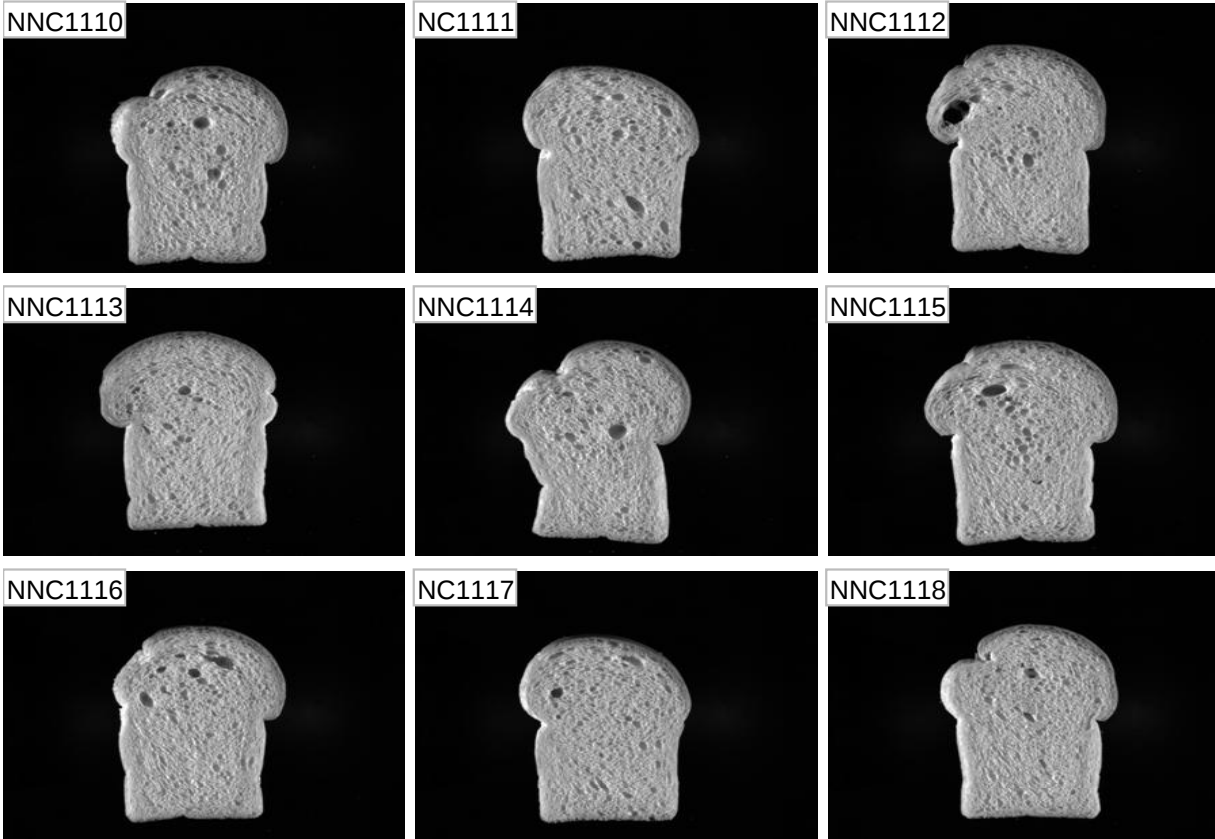
LIST of NRPN SAMPLE ID

Entry	Breeder ID	HWWQL ID		
		North Central Plains	Northern High Plains	Northern Plains
1	Kharkof	13-NNC1101	13-NNH1101	13-NNP1101
2	Overland	13-NNC1102	13-NNH1102	13-NNP1102
3	Wesley	13-NNC1103	13-NNH1103	13-NNP1103
4	Jerry	13-NNC1104	13-NNH1104	13-NNP1104
5	Lyman	13-NNC1105	13-NNH1105	13-NNP1105
6	N10MD2020	13-NNC1106	13-NNH1106	13-NNP1106
7	N10MD2073	13-NNC1107	13-NNH1107	13-NNP1107
8	NX10MD2216	13-NNC1108	13-NNH1108	13-NNP1108
9	NX10MD2300	13-NNC1109	13-NNH1109	13-NNP1109
10	NI07703	13-NNC1110	13-NNH1110	13-NNP1110
11	NI09710H	13-NNC1111	13-NNH1111	13-NNP1111
12	NI10712	13-NNC1112	13-NNH1112	13-NNP1112
13	NI10718W	13-NNC1113	13-NNH1113	13-NNP1113
14	NE10418	13-NNC1114	13-NNH1114	13-NNP1114
15	NE10442	13-NNC1115	13-NNH1115	13-NNP1115
16	NE10589	13-NNC1116	13-NNH1116	13-NNP1116
17	NH10665	13-NNC1117	13-NNH1117	13-NNP1117
18	NW10487	13-NNC1118	13-NNH1118	13-NNP1118
19	NHH11569	13-NNC1119	13-NNH1119	13-NNP1119
20	NE08499	13-NNC1120	13-NNH1120	13-NNP1120
21	NHH09655	13-NNC1121	13-NNH1121	13-NNP1121
22	LCH10-13	13-NNC1122	13-NNH1122	13-NNP1122
23	LCH08-80	13-NNC1123	13-NNH1123	13-NNP1123
24	LCH08-109	13-NNC1124	13-NNH1124	13-NNP1124
25	SD06158	13-NNC1125	13-NNH1125	13-NNP1125
26	SD07165	13-NNC1126	13-NNH1126	13-NNP1126
27	SD07184	13-NNC1127	13-NNH1127	13-NNP1127
28	SD08080	13-NNC1128	13-NNH1128	13-NNP1128
29	SD08200	13-NNC1129	13-NNH1129	13-NNP1129
30	SD09118	13-NNC1130	13-NNH1130	13-NNP1130
31	SD09138	13-NNC1131	13-NNH1131	13-NNP1131
32	SD09192	13-NNC1132	13-NNH1132	13-NNP1132
33	SD10026-2	13-NNC1133	13-NNH1133	13-NNP1133
34	SD10257-2	13-NNC1134	13-NNH1134	13-NNP1134
35	BL11002	13-NNC1135	13-NNH1135	13-NNP1135
36	MT08172	13-NNC1136	13-NNH1136	13-NNP1136
37	MT0978	13-NNC1137	13-NNH1137	13-NNP1137

2013 NRPN Intraregional Production Zone North Central Plains



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2013 NRPN Intraregional Production Zone North Central Plains

NNC1119



NNC1120



NNC1121



NNC1122



NNC1123



NNC1124



NNC1125



NNC1126



NNC1127



2013 NRPN Intraregional Production Zone North Central Plains

NNC1128



NNC1129



NNC1130



NNC1131



NNC1132



NNC1133



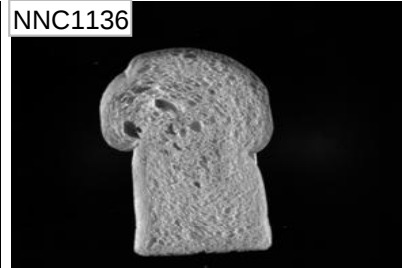
NNC1134



NNC1135



NNC1136



NNC1137





Hard Winter Wheat Quality Report 2013 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
NE10418	60.3	Very Good	100.0	43.5	Very Good	90.8		16,
Lyman	57.7	Very Good	95.6	35.3	Good	73.5	1AL	9,16,21,
SD10257-2	56.8	Very Good	94.2	23.5	Poor	48.9		16,21,
NI10718W	55.6	Very Good	92.1	20.4	Very Poor	42.6		9,14,
NI09710H	55.5	Very Good	92.1	18.1	Very Poor	37.7		5,11,16,17,18,21,
NE10442	54.2	Very Good	89.9	21.9	Poor	45.6		21,
SD08200	53.8	Very Good	89.3	31.2	Average	65.1		14,15,
NH10665	53.5	Good	88.7	18.4	Very Poor	38.4		5,11,13,16,17,18,21,
SD07184	53.4	Good	88.5	45.0	Very Good	93.8		
Wesley	53.3	Good	88.4	44.7	Very Good	93.1		3,5,
SD07165	53.1	Good	88.0	19.1	Very Poor	39.8		14,15,
Overland	52.9	Good	87.7	19.9	Poor	41.5		16,
LCH10-13	52.9	Good	87.7	40.0	Very Good	83.4		
SD08080	51.8	Good	85.9	30.8	Average	64.1		1,
NHH11569	51.7	Average	85.7	28.1	Average	58.7		16,21,
SD09118	51.5	Average	85.4	26.4	Average	55.0		16,21,
SD10026-2	50.7	Average	84.0	31.6	Average	66.0		16,
BL11002	50.3	Average	83.5	34.6	Good	72.1		
Redfield	49.0	Average	81.3	39.0	Very Good	81.4		
NE10589	48.9	Average	81.0	21.3	Poor	44.4		11,13,16,17,18,21,
Kharkof	48.8	Average	80.9	46.3	Very Good	96.5		2,4,16,
SD09192	48.3	Average	80.1	15.0	Very Poor	31.4	1AL	3,14,15,21,
NW10487	48.0	Poor	79.6	30.0	Average	62.6		16,21,
NI10712	47.8	Poor	79.3	24.1	Poor	50.2		2,14,18,
Jerry	47.6	Poor	78.9	31.8	Good	66.3		
MT08172	47.5	Poor	78.7	25.5	Poor	53.2		14,15,
SD09138	47.4	Poor	78.5	24.3	Poor	50.8		21,
NE08499	47.3	Poor	78.4	14.9	Very Poor	31.1		14,
NI07703	47.3	Poor	78.4	32.0	Good	66.8	1BL	16,21,
LCS Wizard	46.8	Very Poor	77.5	19.3	Very Poor	40.2		16,18,21,

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 2013 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		%	Baking		%	1RS	Trait Deficiencies
	Score	Rating		Score	Rating			
NHH09655	46.6	Very Poor	77.2	34.9	Good	72.7		1,16,
N10MD2073	46.5	Very Poor	77.1	48.0	Very Good	100.0		2,16,
MT0978	46.1	Very Poor	76.5	32.9	Good	68.7		21,
N10MD2020	45.9	Very Poor	76.2	30.4	Average	63.4		14,
LCH08-109	42.4	Very Poor	70.2	19.4	Very Poor	40.5		1,14,15,
NX10MD2216	41.7	Very Poor	69.2	28.2	Average	58.8		8,16,21,
NX10MD2300	41.2	Very Poor	68.2	38.9	Good	81.2		8,9,10,14,21,

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LINE	Wt/Bu (lb)	SKCS Average Kernel						Hardness			
		Moisture		Weight		Diameter		SKCS	Class	Distribution	
		(%)	(sd)	(mg)	(sd)	(mm)	(sd)				
								(sd)			
Kharkof	61.0	10.0	0.8	24.4	5.4	2.45	0.24	53 18	HARD	10--27--27--36--02	
Overland	59.5	10.6	0.6	29.0	7.5	2.62	0.30	57 19	HARD	08--22--29--41--02	
Wesley	59.3	10.2	0.5	31.2	8.0	2.74	0.35	58 19	HARD	07--21--24--48--02	
Jerry	58.5	9.9	0.6	30.5	7.6	2.62	0.33	50 20	MIXED	17--27--25--31--03	
Lyman	61.3	10.4	0.5	30.8	7.1	2.67	0.27	71 16	HARD	01--05--16--78--01	
N10MD2020	59.3	9.2	0.7	25.9	6.6	2.58	0.27	57 18	HARD	08--19--26--47--02	
N10MD2073	59.3	9.3	0.8	24.1	6.5	2.53	0.28	59 18	HARD	05--19--29--47--01	
NX10MD2216	58.4	10.8	0.5	29.5	7.4	2.65	0.31	71 16	HARD	01--03--19--77--01	
NX10MD2300	59.3	10.9	0.5	27.5	6.6	2.61	0.29	71 17	HARD	01--06--17--76--01	
NI07703	59.2	9.9	0.8	27.1	6.9	2.70	0.31	68 24	HARD	07--15--16--62--02	
NI09710H	58.8	9.7	0.7	33.4	7.2	2.81	0.34	53 18	MIXED	14--22--29--35--03	
NI10712	58.4	10.1	0.6	25.0	5.9	2.56	0.27	70 18	HARD	02--06--21--71--01	
NI10718W	59.4	8.7	0.9	29.1	7.0	2.63	0.33	62 18	HARD	04--17--25--54--01	
NE10418	61.2	9.0	0.9	34.8	7.5	2.88	0.31	55 17	HARD	09--19--32--40--02	
NE10442	60.7	9.5	0.7	31.5	6.9	2.77	0.31	63 19	HARD	04--16--26--54--01	
NE10589	61.1	9.9	0.4	29.3	7.4	2.66	0.29	60 20	MIXED	11--12--26--51--03	
NH10665	60.1	9.0	0.6	29.8	7.2	2.75	0.34	59 20	HARD	09--17--26--48--02	
NW10487	60.1	8.3	0.8	28.9	6.3	2.64	0.28	54 19	MIXED	13--20--29--38--03	
NHH11569	58.2	8.8	0.7	28.0	7.0	2.66	0.32	51 18	MIXED	15--26--29--30--03	
NE08499	58.9	8.0	0.7	27.3	6.6	2.56	0.29	55 18	HARD	10--20--33--37--02	
NHH09655	57.8	12.8	0.4	26.9	6.9	2.60	0.32	64 18	HARD	04--15--19--62--01	
LCH10-13	60.8	13.1	0.3	30.0	6.4	2.60	0.27	59 20	HARD	07--20--24--49--02	
LCH08-80	60.0	13.1	0.4	27.3	6.8	2.63	0.31	66 20	HARD	03--12--27--58--01	
LCH08-109	58.0	13.1	0.4	28.1	7.3	2.57	0.30	47 25	MIXED	28--22--21--29--03	
SD06158	59.6	12.5	0.3	27.5	7.4	2.55	0.29	62 19	HARD	05--15--24--56--01	
SD07165	60.3	12.7	0.3	27.0	6.4	2.60	0.29	67 17	HARD	02--08--23--67--01	
SD07184	59.7	12.7	0.3	30.5	7.5	2.69	0.30	59 18	HARD	06--18--27--49--02	
SD08080	57.8	12.9	0.4	28.7	6.5	2.56	0.27	51 19	MIXED	16--25--27--32--03	
SD08200	60.1	12.6	0.4	28.4	7.4	2.64	0.29	70 18	HARD	02--07--20--71--01	
SD09118	59.3	13.5	0.3	28.9	7.7	2.59	0.32	63 18	HARD	03--14--27--56--01	
SD09138	59.4	13.2	0.3	29.4	7.6	2.64	0.30	64 22	HARD	06--16--19--59--02	
SD09192	60.4	13.3	0.3	35.2	8.2	2.81	0.31	66 20	HARD	06--10--21--63--02	
SD10026-2	60.0	12.7	0.3	27.5	6.9	2.64	0.31	65 19	HARD	04--13--25--58--01	
SD10257-2	60.7	13.2	0.3	30.7	7.5	2.72	0.32	74 18	HARD	00--02--19--79--01	
BL11002	59.8	12.8	0.3	30.1	7.5	2.66	0.31	68 18	HARD	03--08--19--70--01	
MT08172	58.5	13.1	0.3	27.6	6.7	2.64	0.29	80 20	HARD	01--03--10--86--01	
MT0978	58.4	12.9	0.3	25.1	6.3	2.56	0.29	83 20	HARD	01--02--07--90--01	

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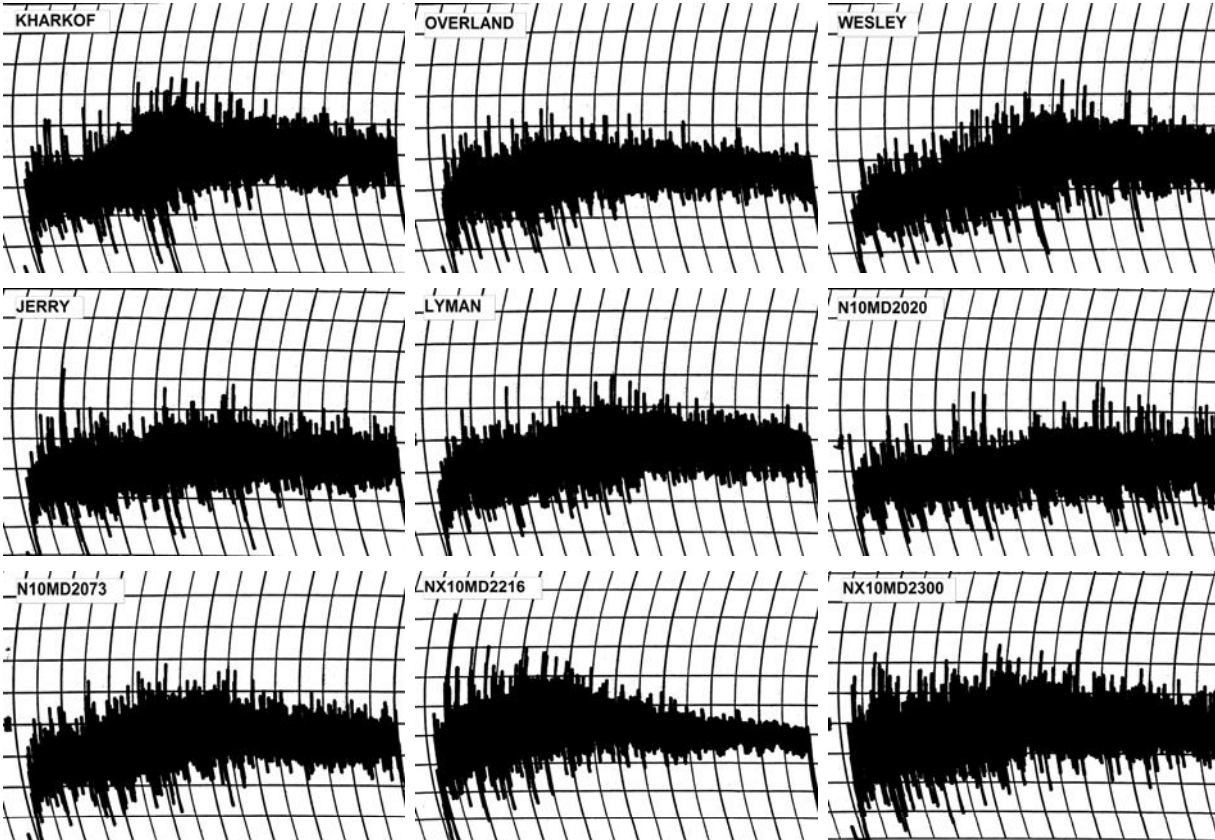
LINE	Wheat		Flour			Noodle Color					
	Protein	Milling Yield	Ash	Protein	PPO	L @ 0	a @ 0	b @ 0	Delta L 24 hrs	Delta a 24 hrs	Delta b 24 hrs
	(%)	(%)	(%)	(%)							
Kharkof	11.5	66.7	0.52	10.3	0.445	81.80	-2.76	23.73	-9.30	0.96	2.77
Overland	10.2	71.4	0.56	8.7	0.480	81.68	-2.62	22.73	-10.06	1.09	4.27
Wesley	11.5	70.5	0.51	10.4	0.489	81.21	-2.47	21.69	-10.33	1.17	3.60
Jerry	10.3	69.2	0.53	9.0	0.537	80.94	-3.08	27.60	-9.08	1.63	0.70
Lyman	11.0	70.1	0.60	9.8	0.518	81.53	-2.99	26.14	-11.11	1.65	3.01
N10MD2020	10.8	66.4	0.54	9.8	0.561	81.28	-2.54	22.18	-11.20	1.58	4.66
N10MD2073	11.4	67.0	0.54	10.3	0.580	81.41	-2.87	24.29	-10.12	1.13	2.89
NX10MD2216	10.7	61.9	0.55	9.5	0.511	85.12	-3.08	23.11	-9.90	1.09	3.08
NX10MD2300	10.6	62.2	0.66	9.3	0.735	86.23	-2.88	20.10	-10.53	0.98	5.40
NI07703	9.7	68.0	0.53	8.4	0.394	83.02	-3.00	23.67	-10.70	1.32	5.07
NI09710H	9.3	69.9	0.45	7.9	0.450	82.02	-2.84	24.07	-9.55	1.29	4.17
NI10712	11.0	66.8	0.56	9.7	0.536	81.02	-2.85	25.58	-10.19	1.18	3.11
NI10718W	10.4	72.4	0.59	9.5	0.471	82.49	-2.85	24.31	-10.09	1.40	2.75
NE10418	10.5	69.9	0.44	9.3	0.399	81.55	-2.63	23.27	-10.05	1.41	3.21
NE10442	9.9	68.2	0.49	8.7	0.461	81.69	-2.33	22.39	-10.15	1.39	2.57
NE10589	9.1	67.6	0.56	7.9	0.469	81.91	-3.00	23.79	-9.30	1.49	3.84
NH10665	9.1	70.6	0.54	7.7	0.483	82.93	-2.88	22.55	-9.57	1.28	4.11
NW10487	9.9	66.3	0.50	8.8	0.595	83.53	-2.58	21.26	-10.49	0.90	3.92
NHH11569	10.7	70.1	0.48	9.2	0.480	81.72	-2.67	21.69	-11.39	1.82	4.21
NE08499	10.1	67.1	0.52	9.0	0.545	82.41	-2.77	23.76	-10.49	1.38	4.49
NHH09655	10.4	66.6	0.51	8.7	0.526	80.29	-2.60	26.07	-9.35	1.40	2.37
LCH10-13	10.1	68.2	0.48	8.7	0.442	82.29	-2.72	22.18	-10.33	1.21	3.69
LCH08-80	9.7	66.1	0.52	8.2	0.471	82.53	-3.05	23.80	-7.05	0.99	2.90
LCH08-109	9.6	67.8	0.51	8.6	0.528	83.65	-2.71	21.35	-9.95	1.20	5.78
SD06158	10.6	68.7	0.57	9.3	0.483	81.20	-2.61	22.84	-9.91	1.35	2.79
SD07165	10.6	68.1	0.52	9.5	0.500	82.30	-3.05	24.43	-9.85	1.13	4.86
SD07184	11.1	68.3	0.46	9.8	0.512	81.36	-2.84	24.10	-8.86	1.25	2.22
SD08080	10.3	70.3	0.50	9.1	0.499	82.10	-2.43	21.78	-8.29	1.36	1.64
SD08200	10.7	68.1	0.46	9.1	0.480	81.77	-2.82	23.80	-9.80	1.48	2.10
SD09118	10.7	69.7	0.55	9.1	0.451	81.20	-2.68	23.16	-9.73	1.51	3.08
SD09138	10.3	68.1	0.54	8.9	0.479	81.30	-2.89	24.66	-8.10	1.33	2.67
SD09192	9.6	66.1	0.57	8.3	0.491	83.30	-3.04	22.34	-10.45	1.51	3.16
SD10026-2	9.8	67.5	0.48	8.2	0.444	82.19	-3.29	25.42	-7.69	1.46	3.09
SD10257-2	10.3	69.2	0.49	8.9	0.455	81.35	-2.52	24.20	-8.94	1.11	2.59
BL11002	10.7	66.5	0.48	9.4	0.227	82.05	-2.98	24.40	-7.30	0.82	4.31
MT08172	10.9	64.9	0.50	9.4	0.441	82.88	-2.45	23.88	-9.36	0.97	4.71
MT0978	10.7	65.6	0.57	9.3	0.210	81.82	-2.76	25.21	-8.03	0.83	4.74

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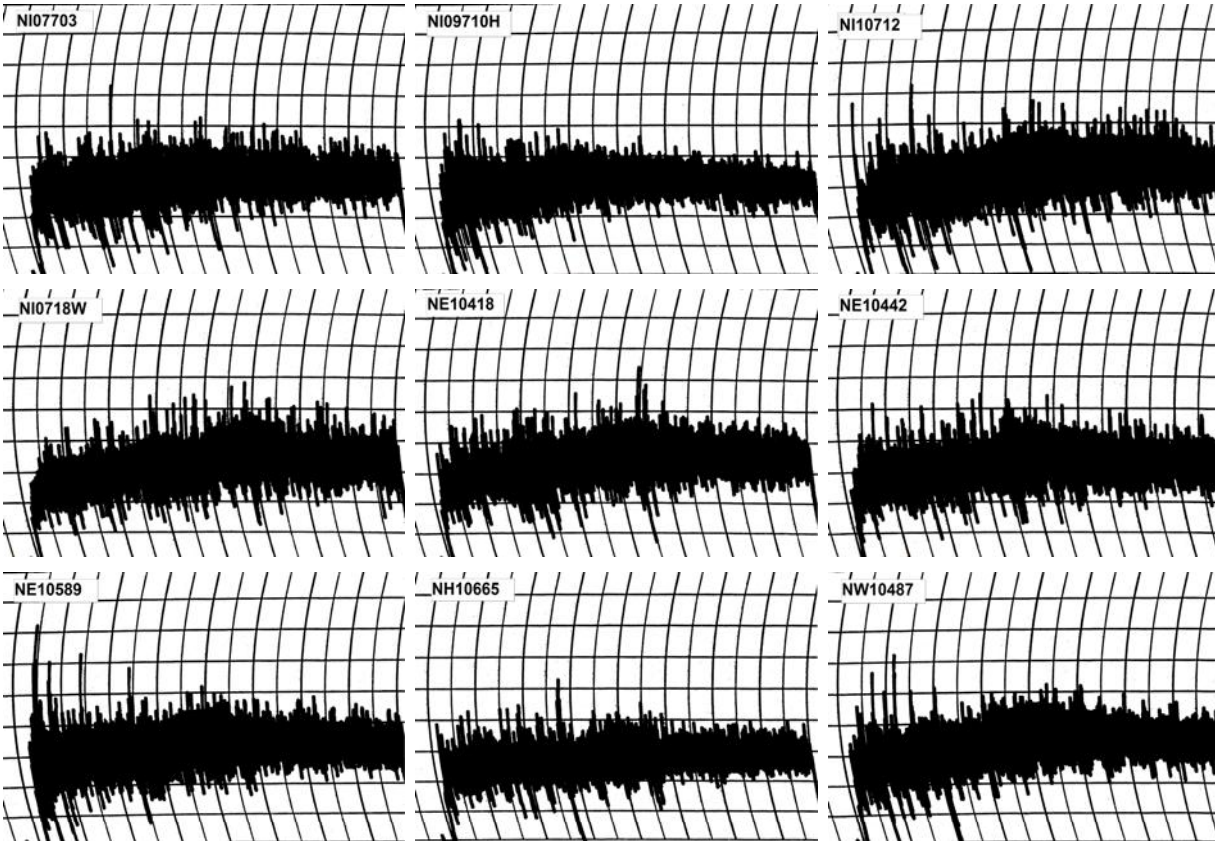
Northern High Plains

	Flour Protein	Mixograph			
		Absorption	As-Is	Corrected	Tolerance
Line	(%)	(%)	(min)	(min)	
Kharkof	10.3	59.1	3.50	2.79	2
Overland	8.7	56.4	2.63	1.58	2
Wesley	10.4	58.8	4.50	3.64	4
Jerry	9.0	56.5	4.38	2.82	4
Lyman	9.8	58.8	3.88	2.87	2
N10MD2020	9.8	58.2	4.25	3.10	3
N10MD2073	10.3	58.7	3.88	3.11	2
NX10MD2216	9.5	60.7	2.50	1.75	0
NX10MD2300	9.3	61.0	3.50	2.37	4
NI07703	8.4	55.4	3.38	1.91	2
NI09710H	7.9	54.7	2.88	1.47	1
NI10712	9.7	57.1	4.50	3.26	3
NI10718W	9.5	56.8	5.00	3.49	3
NE10418	9.3	57.4	4.38	2.96	2
NE10442	8.7	56.5	3.75	2.28	3
NE10589	7.9	53.2	4.00	2.05	2
NH10665	7.7	53.8	4.00	1.95	1
NW10487	8.8	55.6	4.00	2.45	2
NHH11569	9.2	56.4	3.50	2.34	2
NE08499	9.0	56.0	4.88	3.14	3
NHH09655	8.7	56.0	3.38	2.05	2
LCH10-13	8.7	55.4	3.88	2.33	4
LCH08-80	8.2	55.0	2.50	1.35	1
LCH08-109	8.6	55.3	6.13	3.66	4
SD06158	9.3	56.9	4.88	3.29	4
SD07165	9.5	57.3	5.38	3.75	4
SD07184	9.8	57.7	4.38	3.20	4
SD08080	9.1	56.5	4.50	2.92	3
SD08200	9.1	56.7	5.38	3.53	4
SD09118	9.1	56.6	3.25	2.11	2
SD09138	8.9	56.3	3.75	2.35	3
SD09192	8.3	55.2	5.50	3.04	3
SD10026-2	8.2	55.1	4.38	2.38	2
SD10257-2	8.9	56.3	2.50	1.56	2
BL11002	9.4	57.0	4.50	3.08	4
MT08172	9.4	58.6	5.63	3.87	4
MT0978	9.3	56.9	3.88	2.62	3

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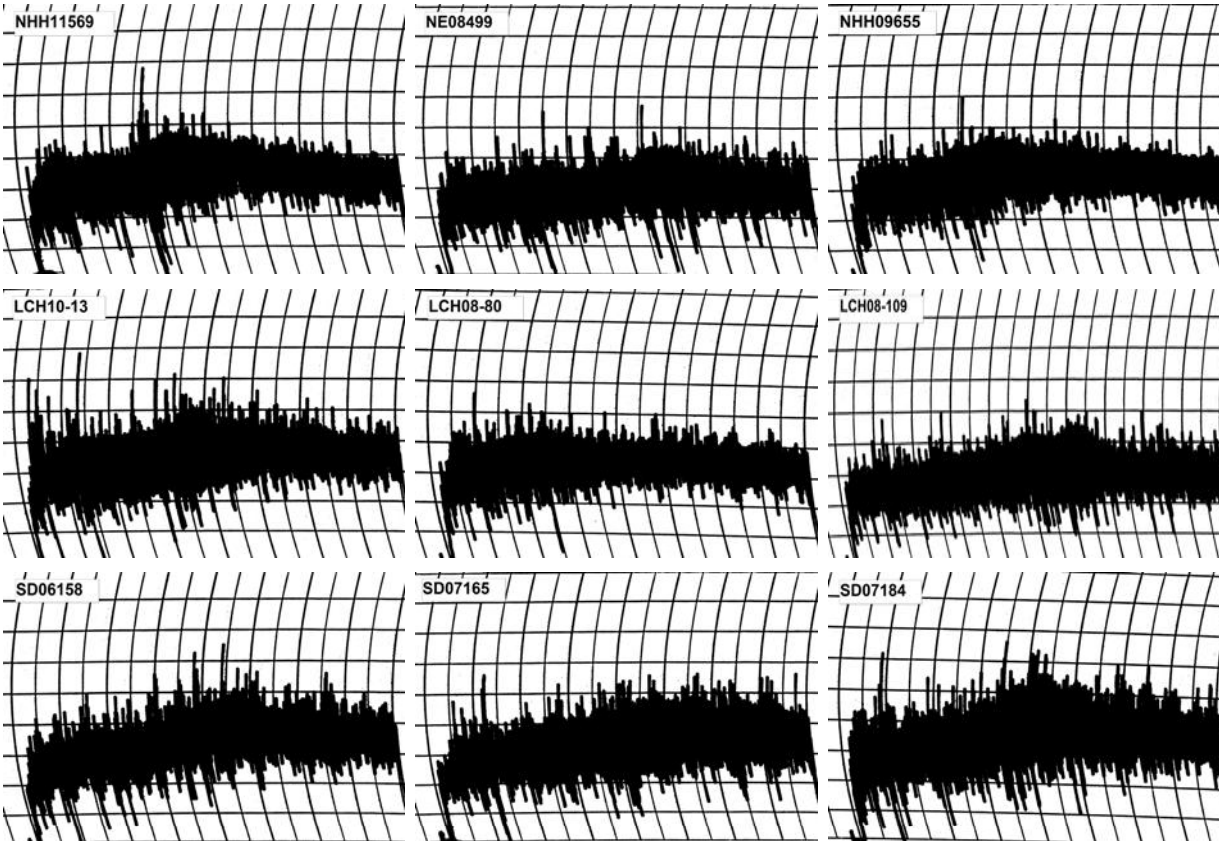


2013 NRPN Intraregional Production Zone Northern High Plains



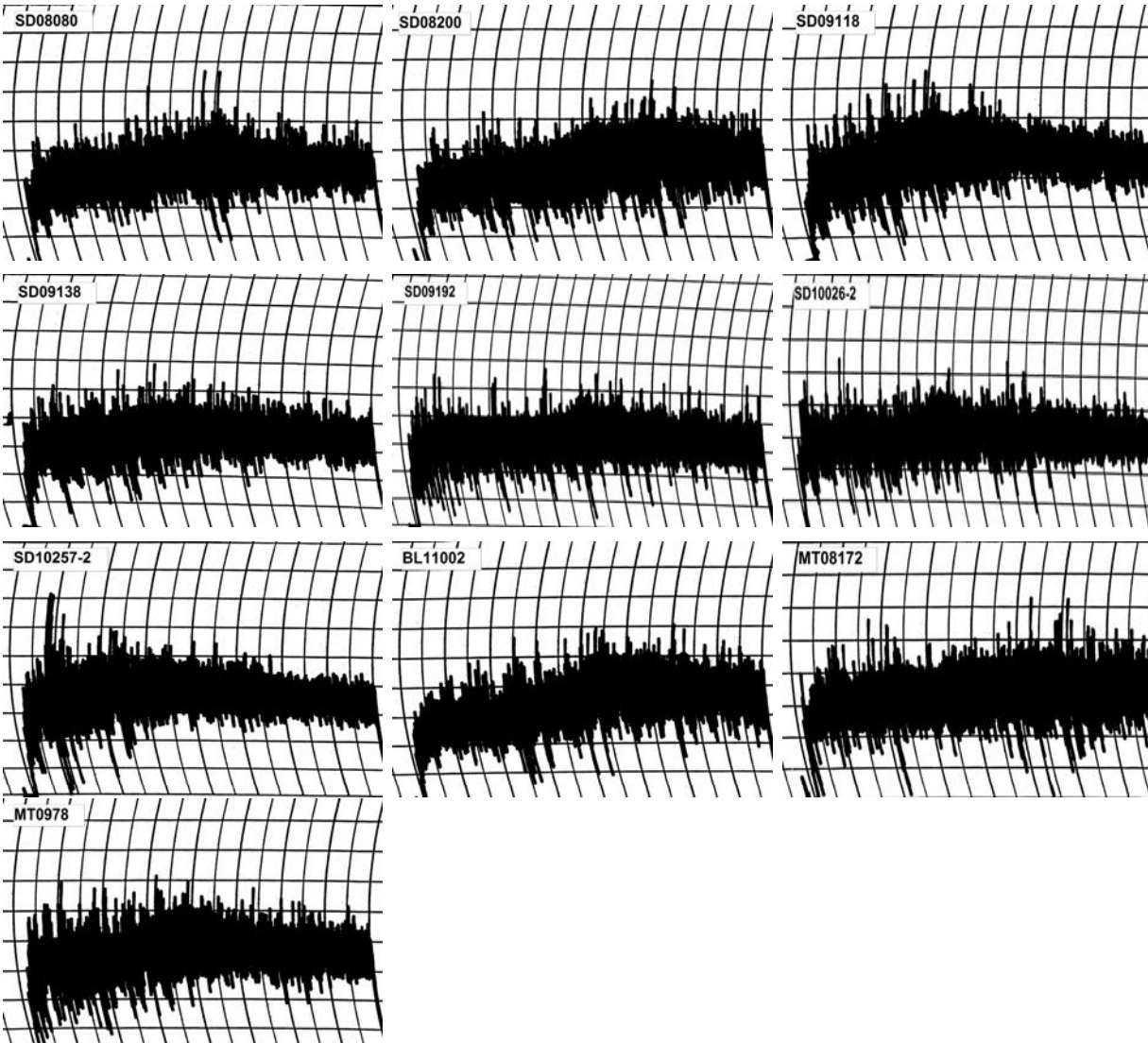
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Line	RVA						
	Stirring Number (RVU)	Peak Viscosity (RVU)	Trough Viscosity (RVU)	Breakdown (RVU)	Final Viscosity (RVU)	Set back (RVU)	Peak Time (min)
Kharkof	130.17	240.75	164.08	76.67	280.25	116.17	6.33
Overland	112.33	222.08	141.17	80.92	250.92	109.75	6.20
Wesley	111.33	222.25	136.92	85.33	256.00	119.08	6.07
Jerry	119.08	207.25	145.75	61.50	265.08	119.33	6.20
Lyman	107.08	185.42	132.08	53.33	243.67	111.58	6.13
N10MD2020	141.17	271.58	186.33	85.25	292.92	106.58	6.53
N10MD2073	131.17	253.67	163.83	89.83	281.08	117.25	6.33
NX10MD2216	97.00	183.33	75.92	107.42	109.75	33.83	3.60
NX10MD2300	113.83	226.42	87.50	138.92	117.42	29.92	3.60
NI07703	110.42	217.75	141.58	76.17	252.75	111.17	6.27
NI09710H	105.50	223.58	144.50	79.08	258.50	114.00	6.20
NI10712	84.42	254.00	159.58	94.42	281.42	121.83	6.20
NI10718W	114.83	200.58	129.67	70.92	241.83	112.17	6.07
NE10418	120.08	271.08	163.50	107.58	269.58	106.08	6.33
NE10442	106.08	177.92	114.83	63.08	215.75	100.92	6.00
NE10589	115.08	210.67	150.33	60.33	264.00	113.67	6.33
NH10665	134.17	234.83	167.33	67.50	286.58	119.25	6.33
NW10487	91.25	226.92	168.00	58.92	296.42	128.42	6.33
NHH11569	127.08	227.17	162.83	64.33	289.00	126.17	6.27
NE08499	119.83	214.67	137.33	77.33	244.25	106.92	6.13
NHH09655	123.83	222.75	149.58	73.17	269.25	119.67	6.20
LCH10-13	114.33	254.17	167.17	87.00	284.58	117.42	6.33
LCH08-80	112.08	256.17	150.25	105.92	259.25	109.00	6.20
LCH08-109	145.33	227.33	138.83	88.50	248.08	109.25	6.13
SD06158	118.42	205.83	151.08	54.75	274.67	123.58	6.27
SD07165	126.08	261.00	169.42	91.58	279.50	110.08	6.40
SD07184	122.00	240.25	166.67	73.58	288.92	122.25	6.33
SD08080	104.58	231.33	151.08	80.25	262.58	111.50	6.27
SD08200	108.83	197.92	141.25	56.67	266.17	124.92	6.20
SD09118	119.67	216.92	141.67	75.25	260.42	118.75	6.13
SD09138	94.83	212.50	150.42	62.08	278.33	127.92	6.13
SD09192	114.08	238.25	162.42	75.83	292.17	129.75	6.20
SD10026-2	89.08	220.83	149.83	71.00	272.25	122.42	6.20
SD10257-2	115.17	206.00	147.67	58.33	275.25	127.58	6.13
BL11002	108.08	247.83	144.08	103.75	251.08	107.00	6.07
MT08172	121.83	216.67	154.67	62.00	281.92	127.25	6.27
MT0978	120.08	240.92	166.33	74.58	290.58	124.25	6.33

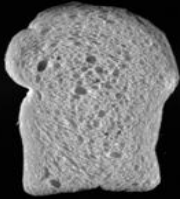
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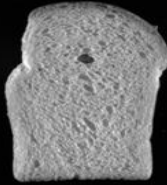
Line	Flour		Mix Time		Dough					
	Protein	Water Abs.	As-is	Corrected	Weight	Proof Height	Crumb Grain	As-Rec'd.	Specific Volume	Loaf Volume Potential
	(%)	(%)	(min)	(min)	(g)	(cm)		(cc)	(cc/g)	(cc/%)
Kharkof	10.3	60.9	6.00	4.77	169.6	7.0	4.0	825	5.6	71
Overland	8.7	56.5	4.00	2.41	165.8	6.6	2.5	740	5.1	73
Wesley	10.4	60.9	6.75	5.46	169.6	6.9	4.0	825	5.6	70
Jerry	9.0	58.0	6.50	4.19	166.3	6.4	3.0	740	5.0	70
Lyman	9.8	60.6	5.25	3.88	169.5	6.7	2.0	765	5.1	67
N10MD2020	9.8	61.1	8.25	6.03	169.3	6.7	3.0	750	5.1	65
N10MD2073	10.3	60.3	5.50	4.40	169.5	6.8	4.0	840	5.6	73
NX10MD2216	9.5	59.1	4.50	3.15	168.6	6.6	0.0	805	5.5	75
NX10MD2300	9.3	63.1	8.25	5.59	172.5	6.9	0.0	1000	6.9	107
NI07703	8.4	58.3	5.25	2.97	167.6	6.5	2.0	775	5.2	83
NI09710H	7.9	56.1	4.00	2.05	164.5	6.2	1.5	720	4.9	78
NI10712	9.7	59.7	7.75	5.61	168.8	6.3	4.5	835	5.6	78
NI10718W	9.5	59.8	9.00	6.29	168.4	6.7	3.5	805	5.4	75
NE10418	9.3	58.0	6.00	4.05	166.6	6.8	4.0	850	5.8	84
NE10442	8.7	57.8	6.75	4.11	167.1	6.6	1.5	745	5.0	74
NE10589	7.9	55.6	5.75	2.95	164.7	6.2	1.0	700	4.8	74
NH10665	7.7	56.0	6.50	3.17	164.7	6.3	1.0	695	4.7	76
NW10487	8.8	58.2	5.88	3.60	167.8	6.6	2.0	775	5.3	78
NHH11569	9.2	58.0	5.00	3.35	167.2	6.4	1.0	745	5.0	69
NE08499	9.0	57.2	8.50	5.46	167.5	6.6	3.5	755	5.1	72
NHH09655	8.7	56.2	4.50	2.74	165.4	6.7	3.0	780	5.3	80
LCH10-13	8.7	57.2	5.50	3.31	165.9	6.9	3.0	810	5.5	85
LCH08-80	8.2	56.6	4.00	2.15	166.1	6.3	1.0	720	4.9	76
LCH08-109	8.6	56.9	8.75	5.22	166.0	6.5	3.0	695	4.7	66
SD06158	9.3	57.8	6.25	4.21	166.8	6.8	4.0	785	5.4	74
SD07165	9.5	58.4	8.25	5.76	167.8	6.6	3.5	810	5.6	76
SD07184	9.8	60.6	7.00	5.11	169.4	7.0	4.0	860	5.9	81
SD08080	9.1	57.6	6.50	4.22	166.4	6.7	3.0	755	5.3	72
SD08200	9.1	59.5	10.00	6.57	167.7	6.6	4.0	750	5.2	70
SD09118	9.1	59.3	4.25	2.76	168.5	6.5	1.0	740	5.0	70
SD09138	8.9	57.6	4.63	2.90	166.6	6.6	1.5	720	5.0	68
SD09192	8.3	58.6	9.00	4.97	166.5	6.9	0.5	760	5.3	81
SD10026-2	8.2	57.8	7.13	3.88	166.7	6.7	4.0	730	5.0	77
SD10257-2	8.9	57.6	4.13	2.58	166.6	6.6	2.0	715	4.9	67
BL11002	9.4	59.0	6.50	4.45	167.6	6.7	3.0	770	5.2	71
MT08172	9.4	59.6	12.50	8.59	166.9	6.7	3.0	735	5.0	66
MT0978	9.3	59.2	5.50	3.72	167.6	6.7	1.0	815	5.5	79

2013 NRPN Intraregional Production Zone Northern High Plains

NNH1101



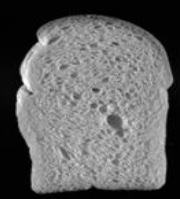
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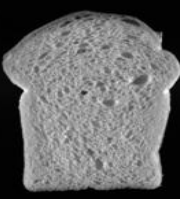
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NNH1104



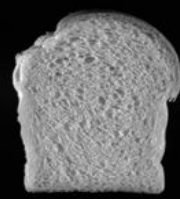
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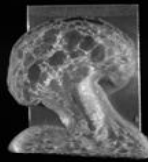
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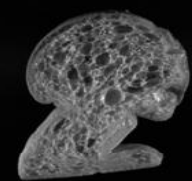
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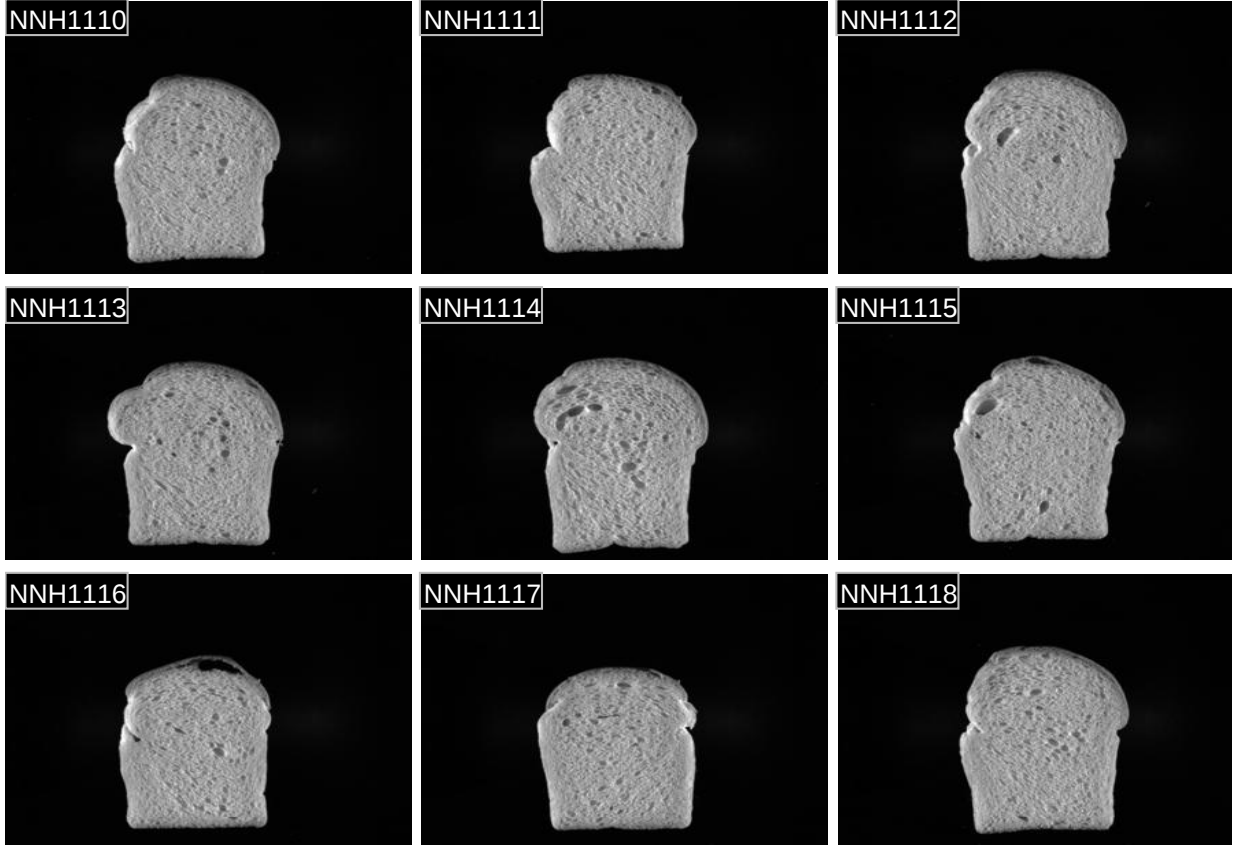
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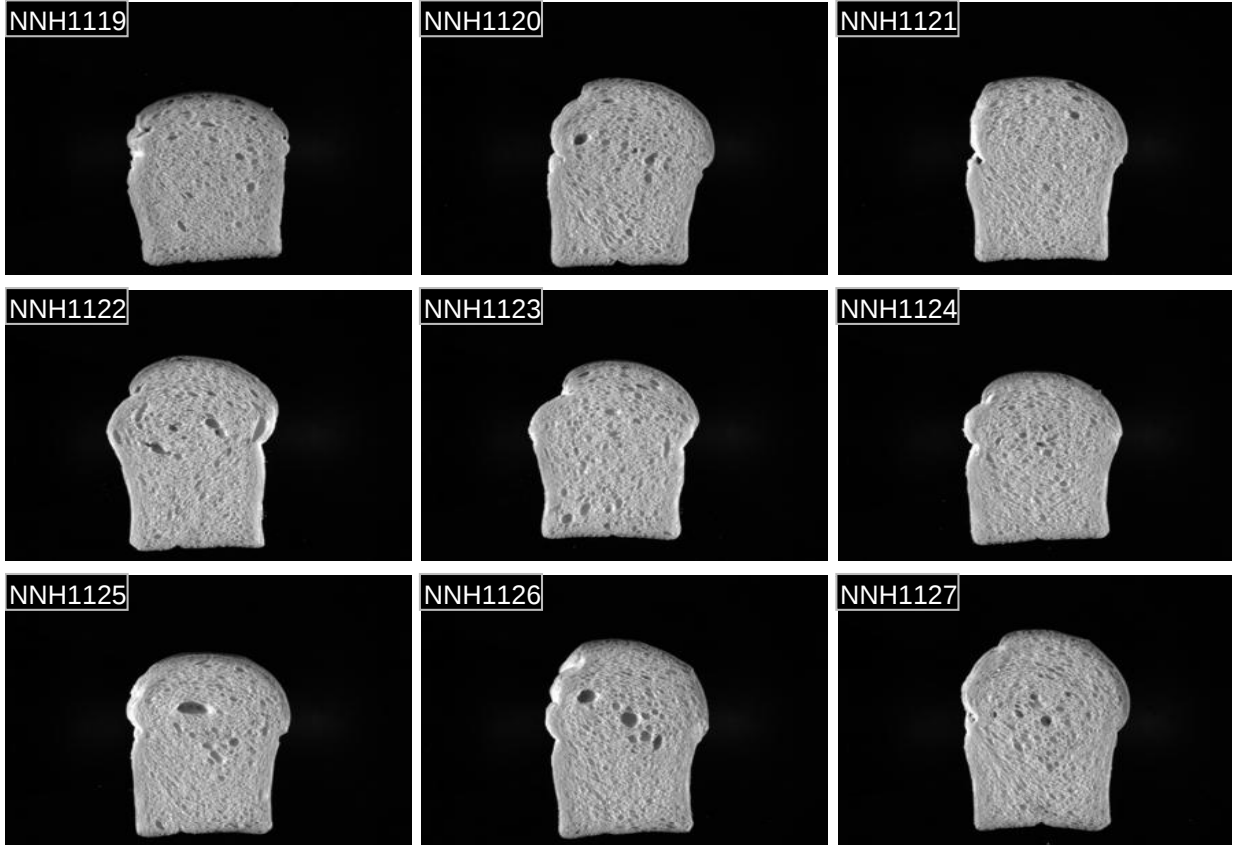
NNH1109



2013 NRPN Intraregional Production Zone Northern High Plains



2013 NRPN Intraregional Production Zone Northern High Plains

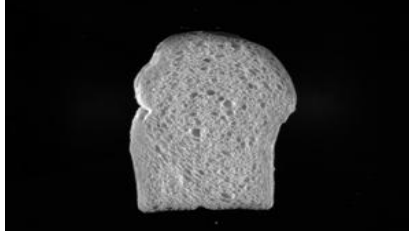


2013 NRPN Intraregional Production Zone Northern High Plains

NNH1128



NNH1129



NNH1130



NNH1131



NNH1132



NNH1133



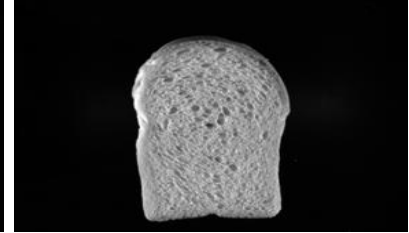
NNH1134



NNH1135



NNH1136



NNH1137





Hard Winter Wheat Quality Report 2013 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
SD10257-2	58.9	Very Good	100.0	26.0	Very Poor	44.2		14,16,21,
SD08080	57.7	Very Good	98.1	41.9	Good	71.1		
Lyman	57.3	Very Good	97.2	32.5	Poor	55.3	1AL	16,21,
SD09138	57.1	Very Good	97.0	27.7	Very Poor	47.1		11,12,16,21,
SD09118	56.5	Very Good	95.9	19.0	Very Poor	32.3		11,12,15,16,17,19,21,
Wesley	56.2	Very Good	95.4	45.4	Good	77.2		14,
SD08200	55.7	Very Good	94.6	25.5	Very Poor	43.4		14,15,
MT0978	55.2	Good	93.7	37.4	Average	63.5		16,
SD07184	55.1	Good	93.6	39.1	Average	66.5		
Overland	55.1	Good	93.5	25.2	Very Poor	42.8		16,19,20,21,
NH10665	54.9	Good	93.2	34.7	Poor	59.0		18,
MT08172	53.7	Good	91.2	28.7	Very Poor	48.7		14,15,
LCH10-13	53.4	Good	90.7	46.1	Very Good	78.3		
NE10442	53.3	Good	90.5	40.3	Good	68.4		
SD10026-2	53.0	Average	90.1	34.8	Average	59.2		
Jerry	53.0	Average	90.0	40.9	Good	69.4		20,21,
NI10718W	52.9	Average	89.8	28.2	Very Poor	48.0		14,18,
BL11002	52.7	Average	89.4	39.0	Average	66.3		
Redfield	52.1	Average	88.4	38.6	Average	65.7		
NHH11569	51.8	Average	88.0	34.6	Poor	58.7		3,12,
NE10418	51.7	Average	87.8	45.3	Good	76.9		
SD09192	51.5	Average	87.5	49.2	Very Good	83.6	1AL	3,9,10,14,
NI09710H	51.1	Poor	86.8	27.7	Very Poor	47.1		1,18,
NE08499	50.9	Poor	86.5	49.2	Very Good	83.7		
SD07165	50.9	Poor	86.4	29.6	Poor	50.3		14,15,
LCS Wizard	50.5	Poor	85.8	30.6	Poor	52.0		2,4,12,16,17,21,
NI10712	49.3	Poor	83.7	29.8	Poor	50.6		14,
NHH09655	48.7	Poor	82.7	37.9	Average	64.4		
N10MD2020	48.1	Poor	81.7	50.1	Very Good	85.2		
NE10589	47.3	Very Poor	80.3	37.6	Average	63.9		8,10,12,13,17,21,

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 2013 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		Baking				1RS	Trait Deficiencies
	Score	Rating	%	Score	Rating	%		
NI07703	47.0	Very Poor	79.8	45.9	Good	77.9	1BL	1,
NW10487	46.5	Very Poor	79.0	37.2	Average	63.2		
N10MD2073	44.4	Very Poor	75.4	33.5	Poor	57.0		2,4,16,20,
LCH08-109	44.0	Very Poor	74.8	47.9	Very Good	81.4		1,2,4,
NX10MD2300	42.1	Very Poor	71.5	58.9	Very Good	100.0		8,9,10,21,
Kharkof	41.0	Very Poor	69.7	50.4	Very Good	85.7		8,10,
NX10MD2216	40.5	Very Poor	68.8	40.0	Good	68.0		1,8,15,16,21,

2013 NRPN Intraregional Production Zone

Northern Plains

LINE	Wt/Bu (lb)	SKCS Average Kernel						Hardness			
		Moisture		Weight		Diameter		SKCS	Class	Distribution	
		(%)	(sd)	(mg)	(sd)	(mm)	(sd)				
Kharkof	61.5	10.8	0.6	28.9	7.5	2.58	0.31	46	19	MIXED	22--27--31--20--03
Overland	61.0	11.6	0.4	31.1	8.7	2.67	0.36	69	19	HARD	04--09--16--71--01
Wesley	59.9	10.9	0.4	31.8	8.3	2.73	0.37	64	18	HARD	06--11--19--64--02
Jerry	61.2	11.1	0.6	32.9	9.2	2.67	0.38	57	20	MIXED	12--15--25--48--03
Lyman	61.1	11.2	0.4	34.9	8.5	2.79	0.36	66	16	HARD	02--08--23--67--01
N10MD2020	61.4	10.5	0.4	28.3	8.7	2.60	0.31	60	21	MIXED	12--12--25--51--03
N10MD2073	59.8	10.8	0.5	25.3	8.3	2.51	0.34	58	22	MIXED	13--17--21--49--03
NX10MD2216	58.3	11.3	0.5	30.7	9.2	2.65	0.38	63	16	HARD	03--09--31--57--01
NX10MD2300	59.2	11.3	0.5	30.2	8.0	2.68	0.33	62	17	HARD	05--12--29--54--01
NI07703	57.8	10.3	0.4	28.0	8.3	2.71	0.35	75	19	HARD	03--05--10--82--01
NI09710H	58.2	10.9	0.5	34.0	9.0	2.79	0.36	58	19	MIXED	13--12--23--52--03
NI10712	58.7	11.7	0.4	27.8	8.2	2.58	0.35	63	20	HARD	09--12--19--60--02
NI10718W	59.3	11.5	0.5	31.0	8.6	2.65	0.37	62	18	HARD	08--10--22--60--02
NE10418	59.4	11.1	0.5	31.7	9.3	2.72	0.36	61	17	HARD	04--16--26--54--01
NE10442	60.0	11.1	0.5	29.8	7.5	2.67	0.33	72	16	HARD	01--04--13--82--01
NE10589	61.0	10.8	0.4	29.0	8.1	2.62	0.31	71	19	HARD	02--07--18--73--01
NH10665	60.4	11.0	0.5	32.6	9.0	2.77	0.37	62	19	HARD	08--12--25--55--02
NW10487	60.2	11.1	0.5	30.3	8.6	2.64	0.32	62	20	HARD	10--11--19--60--02
NHH11569	60.1	10.7	0.5	32.3	9.6	2.71	0.38	55	21	MIXED	14--18--23--45--03
NE08499	60.3	11.2	0.5	29.6	8.4	2.63	0.36	64	20	HARD	06--11--22--61--02
NHH09655	59.0	10.9	0.5	30.3	8.9	2.66	0.37	65	20	HARD	08--07--15--70--02
LCH10-13	61.4	10.6	0.5	30.8	7.9	2.65	0.33	58	20	MIXED	11--15--21--53--03
LCH08-80	59.6	10.8	0.5	25.5	7.4	2.48	0.33	73	18	HARD	01--06--12--81--01
LCH08-109	57.4	10.8	0.4	25.6	7.1	2.45	0.30	60	22	MIXED	12--13--17--58--03
SD06158	60.5	10.8	0.6	28.2	8.4	2.55	0.35	59	18	HARD	09--14--23--54--02
SD07165	60.0	11.0	0.6	28.1	8.0	2.58	0.34	62	19	HARD	07--11--22--60--02
SD07184	60.1	10.8	0.5	30.8	8.1	2.67	0.32	56	19	MIXED	11--18--24--47--03
SD08080	60.3	10.5	0.5	31.1	7.5	2.67	0.31	58	19	HARD	10--15--28--47--02
SD08200	60.9	11.0	0.5	33.9	9.4	2.75	0.37	64	18	HARD	04--12--19--65--01
SD09118	61.1	10.8	0.5	31.1	8.5	2.61	0.34	67	18	HARD	05--08--20--67--01
SD09138	61.3	11.4	0.5	33.2	8.5	2.71	0.35	69	19	HARD	03--11--13--73--01
SD09192	59.8	11.1	0.4	33.3	9.6	2.68	0.38	69	17	HARD	04--05--19--72--01
SD10026-2	60.8	10.4	0.6	30.4	9.5	2.67	0.37	67	20	HARD	04--12--17--67--01
SD10257-2	61.4	10.5	0.6	34.6	9.3	2.83	0.37	67	17	HARD	02--10--21--67--01
BL11002	60.0	10.7	0.5	31.0	8.4	2.70	0.36	68	19	HARD	03--12--15--70--01
MT08172	60.1	10.9	0.6	32.9	8.9	2.78	0.35	70	18	HARD	04--08--12--76--01
MT0978	60.4	10.7	0.5	30.5	7.5	2.73	0.36	76	21	HARD	02--08--12--78--01

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Northern Plains

LINE	Wheat		Flour			Noodle Color					
	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	62.2	0.44	13.2	0.574	82.71	-2.49	21.78	-11.98	1.54	2.43
Overland	13.1	69.7	0.47	11.6	0.531	79.39	-1.77	22.87	-11.25	1.29	1.63
Wesley	13.7	70.1	0.46	12.5	0.629	81.66	-2.09	21.23	-12.70	1.17	1.92
Jerry	13.4	69.6	0.45	12.4	0.606	81.61	-2.67	24.14	-10.97	1.51	2.44
Lyman	14.0	68.2	0.46	12.7	0.571	80.97	-2.57	24.69	-12.35	1.59	2.65
N10MD2020	13.6	67.1	0.46	12.8	0.693	79.84	-1.70	18.92	-14.09	1.67	4.68
N10MD2073	14.2	67.3	0.45	13.2	0.614	81.49	-2.23	21.35	-13.17	1.45	2.22
NX10MD2216	12.8	61.8	0.45	12.0	0.510	84.49	-2.23	19.52	-15.79	1.27	5.80
NX10MD2300	13.4	63.2	0.53	12.4	0.757	83.43	-1.83	18.35	-17.08	1.77	5.67
NI07703	13.0	66.3	0.48	11.7	0.513	82.60	-2.02	21.54	-14.39	1.52	4.92
NI09710H	12.5	68.1	0.40	11.2	0.571	80.51	-2.15	24.75	-11.30	1.43	1.60
NI10712	13.1	68.2	0.43	11.9	0.532	81.87	-2.38	23.04	-12.19	1.05	4.51
NI10718W	12.1	70.1	0.49	10.9	0.574	82.84	-2.43	21.31	-12.11	1.35	4.43
NE10418	13.7	68.0	0.44	12.6	0.583	82.91	-1.69	18.88	-14.46	0.84	5.22
NE10442	12.7	67.0	0.48	11.7	0.575	81.84	-1.74	20.15	-11.37	0.95	3.35
NE10589	12.4	64.8	0.48	11.1	0.567	81.20	-2.38	23.88	-11.47	1.30	2.67
NH10665	12.6	69.8	0.45	11.4	0.594	81.17	-1.90	24.89	-12.73	1.38	-0.35
NW10487	12.9	66.2	0.48	11.9	0.678	82.26	-2.06	20.21	-13.80	1.27	4.85
NHH11569	13.0	69.8	0.41	11.6	0.561	80.91	-1.87	21.20	-13.05	1.49	3.83
NE08499	13.1	68.4	0.47	11.7	0.655	80.77	-2.14	22.67	-13.17	1.84	2.82
NHH09655	13.1	67.1	0.41	11.7	0.639	81.41	-2.28	22.80	-12.11	1.18	3.04
LCH10-13	12.9	68.1	0.41	11.6	0.621	81.63	-2.13	21.12	-11.60	1.55	3.88
LCH08-80	13.0	67.4	0.46	12.1	0.553	80.97	-2.26	23.68	-11.74	1.54	2.18
LCH08-109	12.9	67.1	0.45	11.8	0.664	81.83	-2.08	22.11	-13.40	1.18	4.75
SD06158	13.2	69.2	0.46	12.2	0.683	81.04	-2.26	21.93	-11.91	1.44	0.68
SD07165	12.2	68.4	0.45	11.2	0.588	82.34	-3.04	24.50	-10.03	1.30	1.76
SD07184	13.4	69.8	0.41	12.3	0.627	82.00	-2.61	21.71	-11.14	1.30	1.80
SD08080	12.8	70.8	0.44	11.7	0.608	81.12	-1.61	18.79	-12.09	1.34	3.85
SD08200	12.6	69.4	0.43	11.4	0.578	81.29	-2.39	22.29	-12.84	1.86	1.99
SD09118	12.2	70.2	0.46	10.8	0.522	81.72	-2.19	21.96	-13.36	1.38	3.41
SD09138	12.3	69.9	0.47	10.8	0.490	81.71	-2.28	21.65	-13.13	1.46	4.03
SD09192	13.1	68.5	0.52	11.7	0.607	81.32	-2.07	22.70	-14.19	1.54	3.35
SD10026-2	12.2	69.7	0.46	11.1	0.523	80.46	-2.36	25.17	-12.87	1.73	2.58
SD10257-2	12.9	70.1	0.45	11.5	0.461	80.19	-1.86	22.42	-11.03	1.18	2.58
BL11002	12.6	68.4	0.47	11.6	0.223	81.47	-2.41	23.38	-10.33	0.97	4.00
MT08172	12.9	68.0	0.46	11.6	0.542	82.02	-1.51	20.55	-13.98	1.32	5.29
MT0978	13.0	69.5	0.50	12.0	0.213	80.07	-1.96	26.11	-10.19	1.16	1.27

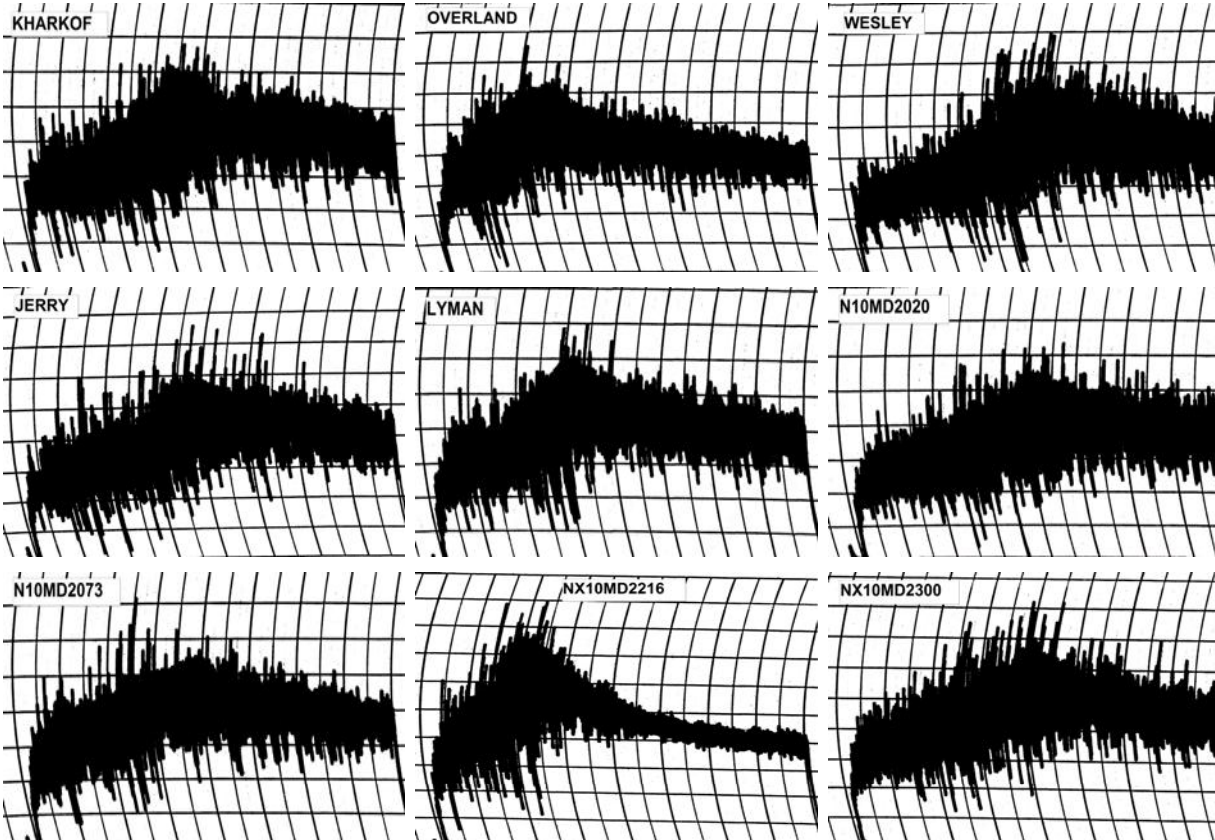
2013 NRPN Intraregional Production Zone

Northern Plains

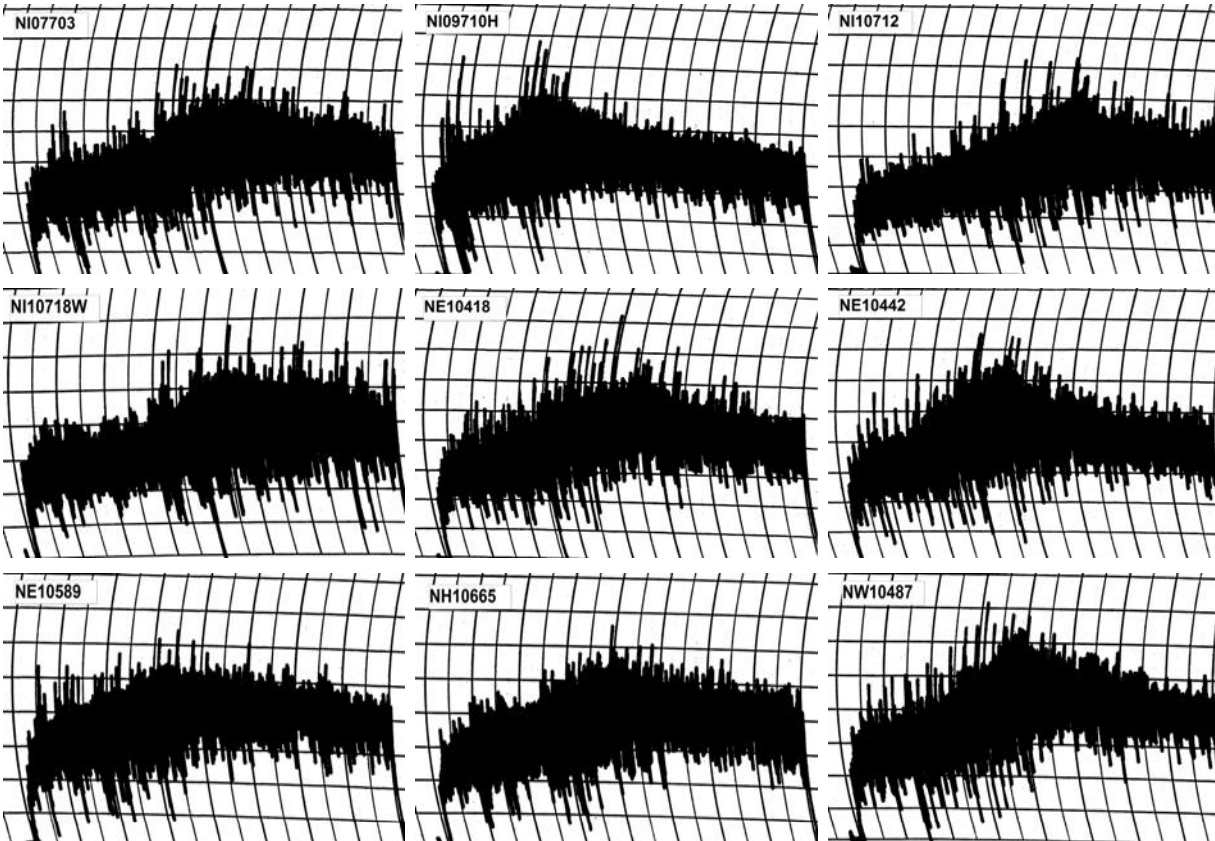
	Flour Protein	Mixograph			
		Absorption	As-Is	Corrected	Tolerance
Line	(%)	(%)	(min)	(min)	
Kharkof	13.2	63.9	3.63	3.63	3
Overland	11.6	61.2	2.50	2.37	1
Wesley	12.5	62.8	4.38	4.38	5
Jerry	12.4	63.6	3.75	3.75	4
Lyman	12.7	63.0	3.00	3.00	2
N10MD2020	12.8	62.7	4.38	4.38	4
N10MD2073	13.2	63.4	3.75	3.75	2
NX10MD2216	12.0	66.9	2.13	2.12	0
NX10MD2300	12.4	67.1	4.00	4.00	4
NI07703	11.7	63.0	4.75	4.61	4
NI09710H	11.2	61.6	2.63	2.38	3
NI10712	11.9	61.9	5.00	4.97	4
NI10718W	10.9	61.1	4.63	4.04	5
NE10418	12.6	64.1	4.38	4.38	4
NE10442	11.7	62.5	3.50	3.38	3
NE10589	11.1	59.5	3.38	3.03	3
NH10665	11.4	62.0	4.00	3.73	4
NW10487	11.9	62.8	3.88	3.85	3
NHH11569	11.6	62.2	3.75	3.56	4
NE08499	11.7	62.4	4.50	4.33	4
NHH09655	11.7	62.4	3.00	2.88	3
LCH10-13	11.6	62.3	4.00	3.83	4
LCH08-80	12.1	62.0	2.38	2.38	1
LCH08-109	11.8	62.6	4.38	4.28	4
SD06158	12.2	63.4	5.00	5.00	5
SD07165	11.2	60.7	5.50	4.99	5
SD07184	12.3	62.3	5.13	5.13	5
SD08080	11.7	62.5	4.00	3.87	4
SD08200	11.4	60.9	5.50	5.10	4
SD09118	10.8	60.9	2.13	1.82	2
SD09138	10.8	60.9	2.63	2.24	2
SD09192	11.7	62.5	4.88	4.73	5
SD10026-2	11.1	61.4	3.63	3.22	3
SD10257-2	11.5	62.2	2.25	2.12	2
BL11002	11.6	61.3	4.00	3.80	4
MT08172	11.6	62.3	8.50	8.11	5
MT0978	12.0	63.0	3.50	3.50	2

2013 NRPN Intraregional Production Zone

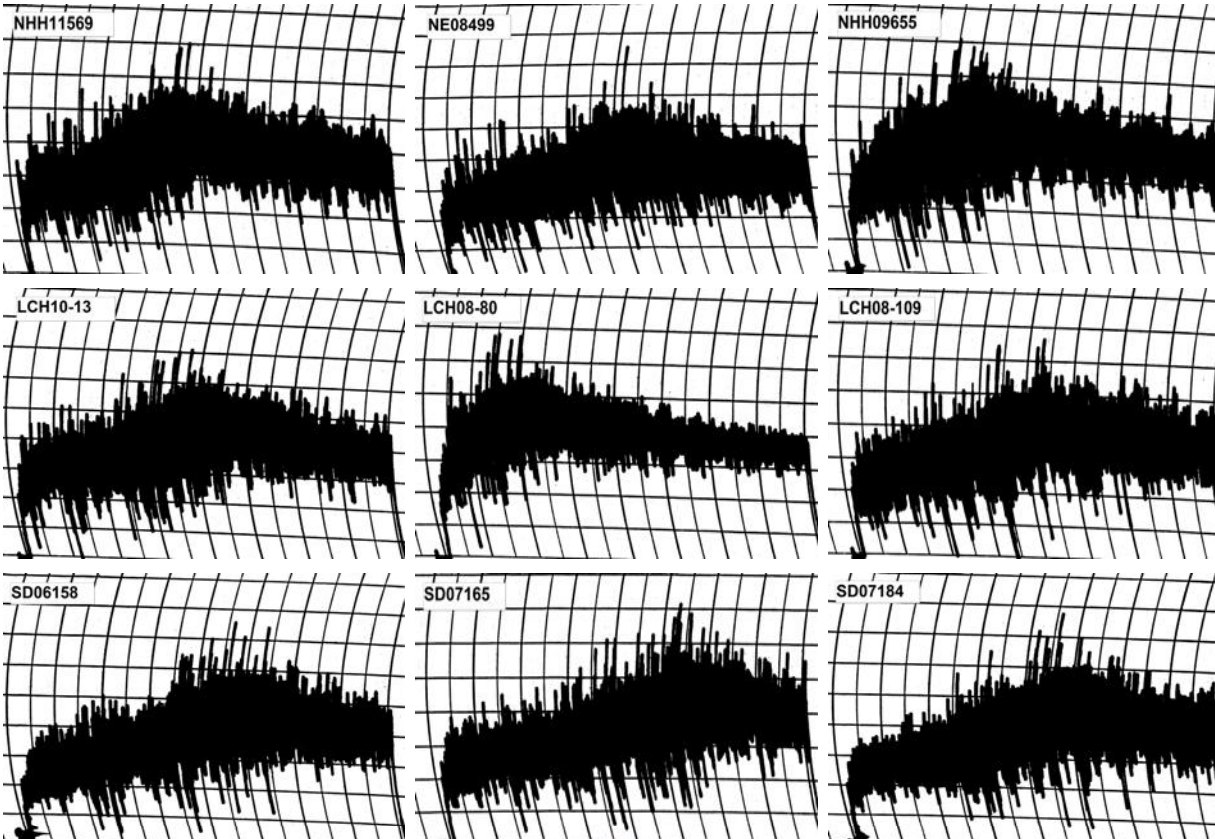
Northern Plains



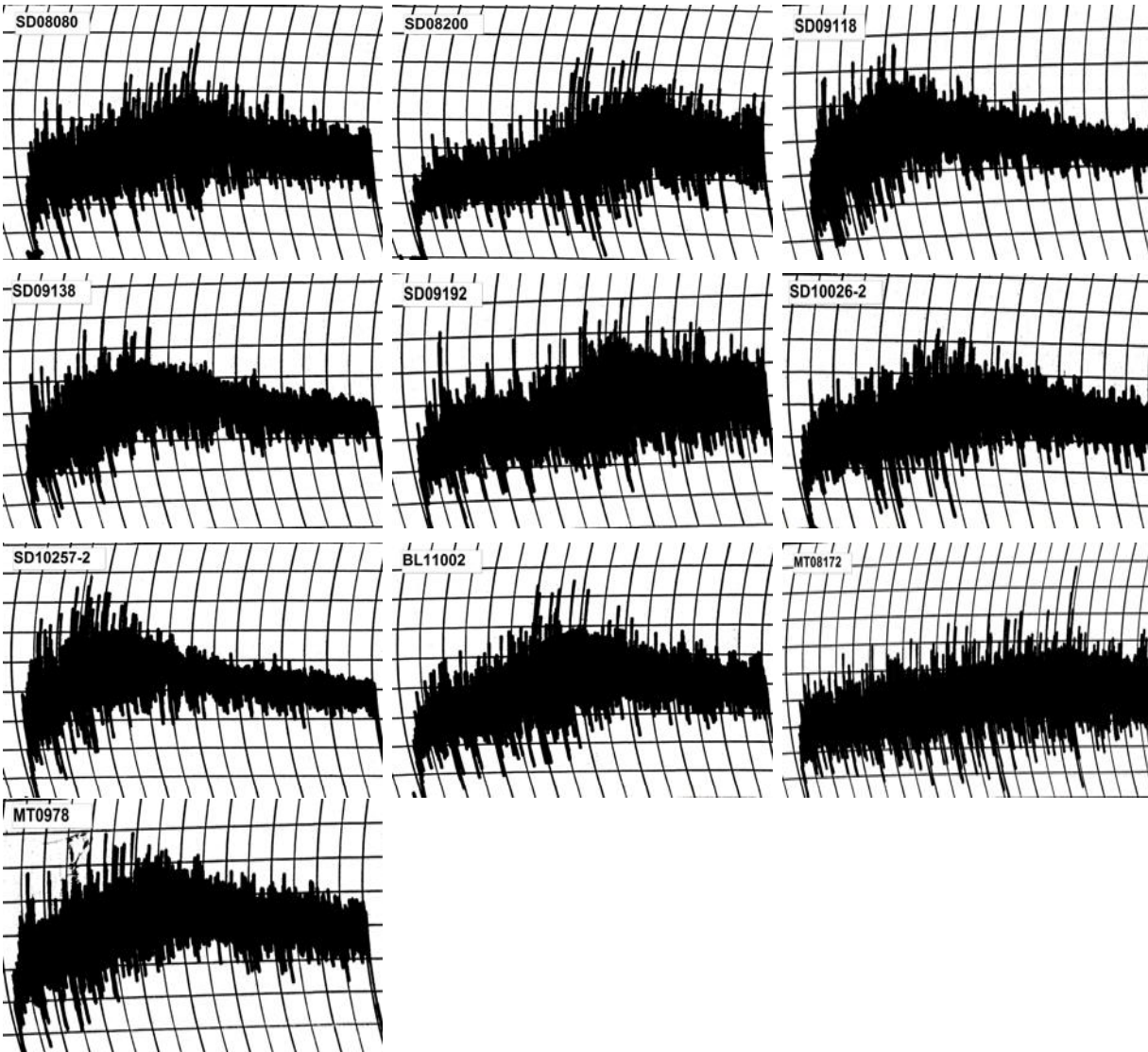
2013 NRPN Intraregional Production Zone Northern Plains



2013 NRPN Intraregional Production Zone Northern Plains



2013 NRPN Intraregional Production Zone Northern Plains



2013 NRPN Intraregional Production Zone

Northern Plains

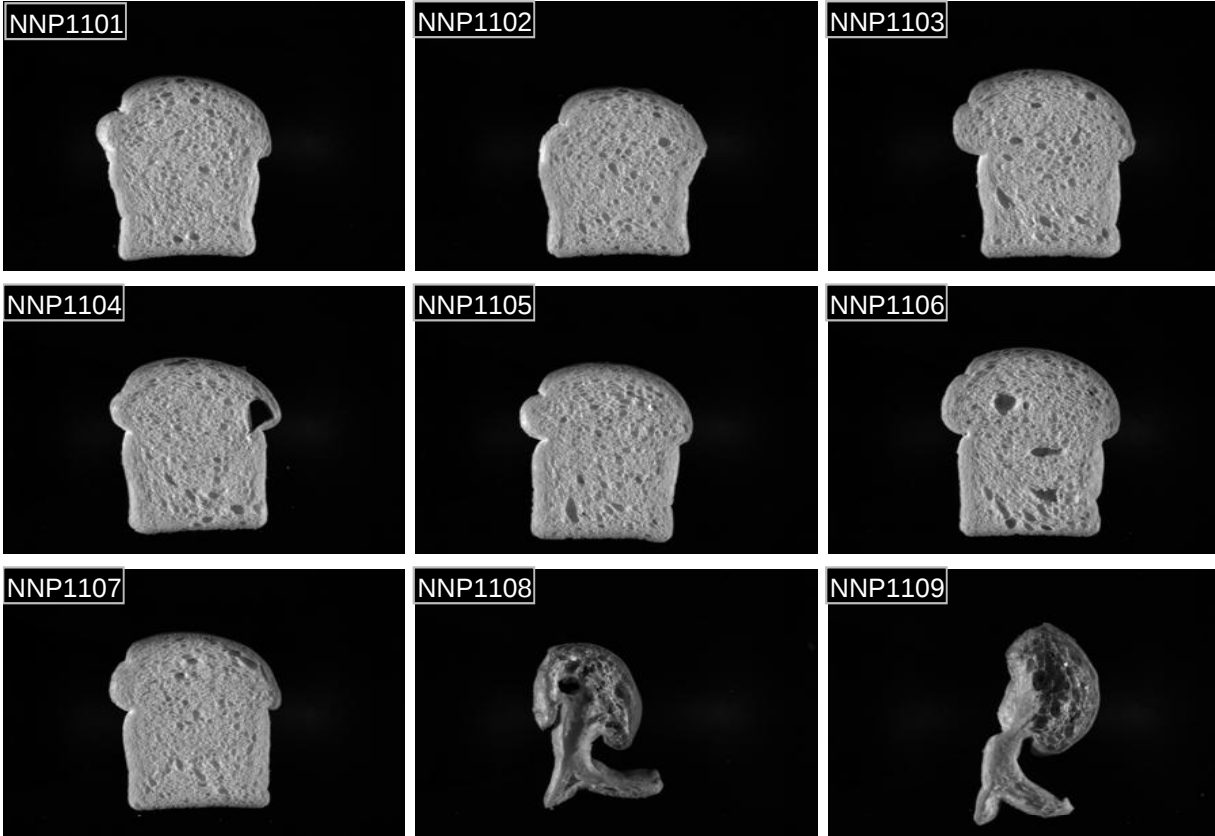
Line	RVA						
	Stirring Number (RVU)	Peak Viscosity (RVU)	Trough Viscosity (RVU)	Breakdown (RVU)	Final Viscosity (RVU)	Set back (RVU)	Peak Time (min)
Kharkof	144.67	235.75	156.17	79.58	264.25	108.08	6.33
Overland	128.25	214.75	139.08	75.67	242.92	103.83	6.20
Wesley	125.25	212.08	135.50	76.58	244.67	109.17	6.13
Jerry	124.25	197.92	129.92	68.00	232.25	102.33	6.13
Lyman	137.42	189.92	133.58	56.33	236.75	103.17	6.20
N10MD2020	138.17	191.08	106.17	84.92	186.50	80.33	6.13
N10MD2073	126.75	190.92	110.42	80.50	197.92	87.50	6.07
NX10MD2216	66.17	75.58	14.67	60.92	21.25	6.58	3.33
NX10MD2300	84.33	146.08	46.17	99.92	63.83	17.67	3.73
NI07703	134.25	207.08	136.17	70.92	247.25	111.08	6.20
NI09710H	116.50	194.42	116.00	78.42	212.08	96.08	6.07
NI10712	123.33	254.08	159.08	95.00	282.83	123.75	6.20
NI10718W	118.50	196.17	116.25	79.92	216.83	100.58	6.00
NE10418	143.25	257.92	163.67	94.25	262.92	99.25	6.47
NE10442	130.33	187.42	127.92	59.50	232.83	104.92	6.13
NE10589	122.50	216.17	139.25	76.92	246.92	107.67	6.27
NH10665	135.33	188.58	112.58	76.00	204.17	91.58	6.07
NW10487	119.58	163.58	97.75	65.83	186.42	88.67	5.93
NHH11569	134.17	193.75	128.33	65.42	229.83	101.50	6.13
NE08499	125.17	207.58	131.00	76.58	230.50	99.50	6.13
NHH09655	102.75	168.00	90.58	77.42	176.67	86.08	5.87
LCH10-13	138.08	259.25	174.92	84.33	290.00	115.08	6.40
LCH08-80	116.42	247.17	152.33	94.83	261.25	108.92	6.33
LCH08-109	114.17	217.08	140.17	76.92	246.58	106.42	6.27
SD06158	141.25	214.58	150.83	63.75	266.33	115.50	6.27
SD07165	142.17	269.00	170.92	98.08	283.08	112.17	6.40
SD07184	142.67	231.17	151.58	79.58	258.00	106.42	6.33
SD08080	139.75	232.75	153.58	79.17	257.50	103.92	6.33
SD08200	131.17	204.92	133.75	71.17	242.42	108.67	6.13
SD09118	128.42	225.00	144.25	80.75	255.92	111.67	6.20
SD09138	123.17	214.42	137.58	76.83	251.50	113.92	6.13
SD09192	121.17	209.33	126.50	82.83	227.83	101.33	6.13
SD10026-2	117.25	224.58	142.58	82.00	257.08	114.50	6.20
SD10257-2	102.67	230.00	153.08	76.92	276.58	123.50	6.20
BL11002	124.58	234.08	137.08	97.00	237.67	100.58	6.20
MT08172	135.58	231.17	143.75	87.42	255.83	112.08	6.20
MT0978	117.33	195.50	109.17	86.33	198.83	89.67	6.07

2013 NRPN Intraregional Production Zone

Northern Plains

Line	Flour		Mix Time		Dough					
	Protein	Water Abs.	As-is	Corrected	Weight	Proof Height	Crumb Grain	As-Rec'd.	Specific Volume	Loaf Volume Potential
	(%)	(%)	(min)	(min)	(g)	(cm)		(cc)	(cc/g)	(cc/%)
Kharkof	13.2	63.8	5.50	5.50	172.8	7.3	3.0	855	5.6	54
Overland	11.6	60.4	2.75	2.60	169.6	6.9	2.0	740	5.0	51
Wesley	12.5	63.8	7.25	7.25	173.0	7.0	3.0	865	5.8	59
Jerry	12.4	64.6	6.00	6.00	174.4	6.8	2.0	775	5.1	50
Lyman	12.7	62.5	4.00	4.00	171.7	6.8	1.5	810	5.4	53
N10MD2020	12.8	63.7	5.50	5.50	172.9	7.1	3.0	865	5.8	58
N10MD2073	13.2	61.8	4.00	4.00	171.2	6.8	2.5	805	5.4	50
NX10MD2216	12.0	65.3	3.00	2.99	175.7	6.7	0.0	990	6.6	77
NX10MD2300	12.4	67.3	5.75	5.75	176.8	7.2	0.0	1110	7.5	86
NI07703	11.7	64.8	6.50	6.30	173.7	7.0	3.0	850	5.7	63
NI09710H	11.2	60.6	4.00	3.63	170.2	6.6	2.2	775	5.2	58
NI10712	11.9	62.9	8.00	7.95	172.3	6.9	3.8	870	5.8	64
NI10718W	10.9	63.5	8.50	7.41	172.5	6.6	3.5	815	5.4	64
NE10418	12.6	64.6	5.13	5.13	174.4	7.3	2.2	910	6.1	63
NE10442	11.7	63.6	4.75	4.58	172.7	7.1	3.2	855	5.7	64
NE10589	11.1	59.8	5.13	4.60	168.5	7.0	2.0	815	5.4	63
NH10665	11.4	62.0	5.50	5.12	171.2	6.2	3.8	810	5.4	60
NW10487	11.9	60.7	4.50	4.47	169.4	7.2	3.5	850	5.8	62
NHH11569	11.6	59.1	5.00	4.75	169.9	7.0	2.5	805	5.4	59
NE08499	11.7	62.8	5.38	5.18	172.6	7.2	3.0	870	5.8	66
NHH09655	11.7	63.9	4.25	4.08	174.2	7.3	2.5	860	5.6	65
LCH10-13	11.6	63.2	5.25	5.02	173.1	7.3	2.5	955	6.4	76
LCH08-80	12.1	59.8	2.63	2.63	169.0	7.1	2.0	855	5.8	61
LCH08-109	11.8	62.6	6.13	5.99	172.6	7.0	3.0	885	5.9	66
SD06158	12.2	63.8	6.75	6.75	173.0	7.3	2.8	915	6.1	67
SD07165	11.2	61.8	7.88	7.14	171.5	7.1	3.5	895	6.0	72
SD07184	12.3	63.1	6.50	6.50	173.1	7.3	3.5	930	6.2	68
SD08080	11.7	62.7	4.50	4.35	172.3	7.0	3.2	895	6.0	68
SD08200	11.4	61.9	8.50	7.88	171.8	7.0	3.5	840	5.6	64
SD09118	10.8	59.4	2.75	2.35	169.3	6.8	1.5	750	5.1	57
SD09138	10.8	59.5	3.13	2.67	172.1	6.7	2.0	775	5.2	61
SD09192	11.7	62.7	7.88	7.64	172.3	7.3	4.0	910	6.2	70
SD10026-2	11.1	61.2	4.00	3.55	170.8	7.1	2.5	845	5.7	67
SD10257-2	11.5	60.6	2.50	2.36	170.0	6.9	2.0	765	5.1	54
BL11002	11.6	62.3	5.75	5.46	171.9	7.1	3.8	875	5.8	67
MT08172	11.6	63.5	10.00	9.54	172.9	6.9	3.5	860	5.7	65
MT0978	12.0	62.6	3.75	3.75	172.1	7.1	2.5	890	5.9	65

2013 NRPN Intraregional Production Zone Northern Plains



2013 NRPN Intraregional Production Zone Northern Plains

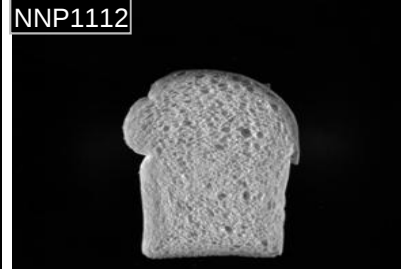
NNP1110



NNP1111



NNP1112



NNP1113



NNP1114



NNP1115



NNP1116



NNP1117



NNP1118



2013 NRPN Intraregional Production Zone Northern Plains

NNP1119



NNP1120



NNP1121



NNP1122



NNP1123



NNP1124



NNP1125



NNP1126



NNP1127



2013 NRPN Intraregional Production Zone Northern Plains

NNP1128



NNP1129



NNP1130



NNP1131



NNP1132



NNP1133



NNP1134



NNP1135



NNP1136



NNP1137



Southern Regional Performance Nursery

2013 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	OK09634	OK95616-98-6756/Overley	OSU
5	OK09125	Overley/TX98D1170	OSU
6	OK09528	TX98D1170/Ok102	OSU
7	OK09729	OK98697/(BATERA//BUC/TOL73)//OK00614	OSU
8	OK1059060	(KAUZ/STAR)//U1254-1-5-1-1/TX89V4213	OSU
9	OK09915C	N91D2308-13/OK03908C//OK03928C	OSU
10	KS09H19-2	ABOVE/DANBY//03-6010(97HW29/97HW131//96HW100-5)	KSU-HAYS
11	KS10HW78-1-1	KS03HW12-1(97HW29/97HW131//96HW100-5)/KS01HW152-6(TREGO/BT	KSU-HAYS
12	KS10HW200-2	RonL2-93(EARLY RonL)	KSU-HAYS
13	CO07W722-F5	KS02HW89-1/BC97ROM-41W	CSU
14	CO08263	CO970547-7/KS01HW152-6	CSU
15	CO08346	Danby/TX00V1117	CSU
16	CO08W218	KS01HW152-6/G001011W	CSU
17	NE10478	NI03418/Camelot	UNL
18	NE09517	W96x1080-21=(Jagger/Thunderbolt)/JAGALENE	UNL
19	NE09521	OK96717-99-6756=(Abilene/2180//Chisholm)/NI01824=(INTENSIVNAJA/NE	UNL
20	NW09627	KS96HW115/NW99L068=(KS84HW1968/3/RIOBLANCO/HBY762A//HALT)	UNL
21	HV9W08-0285	HV9W02-942R//TX98D1073/KS950412-F-1	WestBred KS
22	HV9W08-1624	HV9W02-942R/KS00F5-14-7	WestBred KS
23	HV9W08-1836	KS00F5-14-7//JAGALENE/VA97W-375WS	WestBred KS
24	KS030887K-6	PRL/2*Pastor//G980129W/3/KS970104-3-13	KSU-Manhattan
25	KS031009K-4	Truman/Jagalene//OVERLEY	KSU-Manhattan
26	KS050255K-7	G982238-2/KS970226-5-4-3//NuHills	KSU-Manhattan
27	K040640K-1		KSU-Manhattan
28	LCH08-109	RECITAL/AGRIPRO CHARTER (AGRIPROW96-410) //92PAN1#33 (W2424	Limgrain Cereal Seeds
29	LCH09-19	P7318(AUSTRIAN BREAD WHEAT, VERY GOOD QWL) / PIONEER2643//	Limgrain Cereal Seeds
30	LCH09-43	KS01HW54(94HW123-5/BTY SIB)/ PROVINCIALE	Limgrain Cereal Seeds
31	LCH08-80	S.6742/92PAN1#33 //92PIN#107	Limgrain Cereal Seeds
32	BL11002	Lakin/Ok102	Bayer CropScience LP
33	TX08A001249	TAM 112/TX98D1158	TAMU
34	TX08V7173	Abilene/TX99U8611	TAMU
35	TX08V7313	TX97V5300/TAM 111	TAMU
36	TX09A001194	TAM 112/TAM 303	TAMU
37	TX09A001264	X01A359/TAM 303	TAMU
38	TX10A001006	Doans/TX01M5009-28	TAMU
39	TX10A001018	Doans/TX01M5009-28	TAMU
40	TX09D1172	TAM 303/TAM 112	TAMU
41	TX09D1127	X01A359/TAM 303	TAMU
42	N10MD2020	N02Y5202/Wesley//OK98699	ARS-LNK
43	N10MD2073	N02Y5202/Wesley//OK98699	ARS-LNK



1 - Test weight
2 - SKCS kernel weight
3 - Kernel weight SD
4 - SKCS kernel diameter
5 - Kernel diameter SD
6 - SKCS hardness
7 - Hardness SD
8 - Flour yield
9 - Flour ash
10 - Milling score

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11 - Flour protein
12 - Bake absorption
13 - Mixograph absorption
14 - Bake mix time
15 - Mixograph mix time
16 - Mixograph tolerance
17 - Dough weight
18 - Proof height
19 - Loaf volume
20 - Volume regression
21 - Crumb grain

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Hard Winter Wheat Quality Report 2013 SRPN-NCP

ID	Milling Score	Rating	%	Baking Score	Rating	%	1RS	Trait Deficiencies
TX09D1172	56.8	Very Good	100.0	65.2	Very Good	100.0		16,
TX09A001264	56.8	Very Good	100.0	47.9	Average	73.5		
TX08V7173	56.6	Very Good	99.7	54.0	Good	82.8		
Scout 66	56.5	Very Good	99.6	51.0	Average	78.2		16,
KS10HW78-1-1	56.0	Very Good	98.6	45.0	Poor	69.0		16,
OK09729	55.0	Very Good	96.9	50.6	Average	77.6		12,
TX10A001006	55.0	Very Good	96.8	28.4	Very Poor	43.6		15,16,19,20,
KS10HW200-2	54.7	Very Good	96.3	59.6	Good	91.3		16,
K040640K-1	53.5	Good	94.2	61.8	Very Good	94.8		
TX10A001018	53.5	Good	94.2	28.8	Very Poor	44.2		12,14,16,17,19,20,21,
OK09125	53.0	Good	93.4	51.7	Average	79.3		5,16,
NE10478	52.9	Good	93.2	38.5	Very Poor	59.1		11,12,13,16,19,
OK09528	52.8	Good	93.0	41.8	Poor	64.0		16,21,
HV9W08-0285	52.8	Good	93.0	57.9	Good	88.7		
Doublestop CL Plus	52.7	Good	92.9	60.7	Good	93.1		10,
OK09634	52.6	Good	92.7	61.3	Very Good	94.0		
TX08A001249	52.4	Good	92.2	61.9	Very Good	94.9	1AL	
TX09A001194	52.1	Average	91.8	46.7	Poor	71.6		3,
HV9W08-1836	52.0	Average	91.6	56.5	Good	86.6		14,15,
TX08V7313	51.9	Average	91.4	54.5	Good	83.5		10,
KS030887K-6	51.8	Average	91.2	40.7	Poor	62.4		14,15,
HV9W08-1624	51.7	Average	91.0	38.8	Very Poor	59.5		9,10,
BL11002	50.8	Average	89.5	41.6	Poor	63.8		
Oakley CL	50.2	Average	88.3	55.3	Good	84.7		14,15,
CO08346	49.9	Average	87.9	40.1	Poor	61.6		
LCH09-19	49.1	Poor	86.4	49.0	Average	75.1		
KS031009K-4	49.0	Poor	86.4	47.8	Average	73.3		
LCH09-43	49.0	Poor	86.3	30.4	Very Poor	46.7		1,16,18,20,21,
TX09D1127	48.8	Poor	86.0	49.5	Average	75.8		
NE09521	48.8	Poor	86.0	36.6	Very Poor	56.1		

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 2013 SRPN-NCP

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11 - Flour protein
12 - Bake absorption
13 - Mixograph absorption
14 - Bake mix time
15 - Mixograph mix time
16 - Mixograph tolerance
17 - Dough weight
18 - Proof height
19 - Loaf volume
20 - Volume regression
21 - Crumb grain

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ID	Milling		Baking				1RS	Trait Deficiencies
	Score	Rating	%	Score	Rating	%		
NE09517	48.7	Poor	85.8	33.9	Very Poor	51.9		9,10,14,15,
CO07W722-F5	47.7	Poor	84.0	32.9	Very Poor	50.5		1,15,19,
CO08W218	47.7	Poor	83.9	47.5	Average	72.9		15,
TAM 107	46.9	Poor	82.6	65.1	Very Good	99.8	1AL	
N10MD2020	45.9	Very Poor	80.9	64.3	Very Good	98.6		
NW09627	45.3	Very Poor	79.7	64.3	Very Good	98.6		1,
LCS Wizard	44.6	Very Poor	78.5	38.7	Very Poor	59.4		2,12,16,17,21,
Kharkof	44.4	Very Poor	78.2	46.1	Poor	70.6		6,16,
LCH08-109	44.3	Very Poor	78.1	58.1	Good	89.0		1,
N10MD2073	44.1	Very Poor	77.7	60.3	Good	92.5		2,4,16,
OK1059060	44.0	Very Poor	77.5	44.0	Poor	67.5		3,9,
CO08263	42.1	Very Poor	74.2	61.4	Very Good	94.1		1,2,4,
KS050255K-7	35.0	Very Poor	61.7	39.4	Poor	60.4		6,8,10,12,13,16,17,

2013 SRPN Intraregional Production Zone

North Central Plains

LINE	Wt/Bu (lb)	SKCS Average Kernel						Hardness			
		Moisture		Weight		Diameter		SKCS	Class	Distribution	
		(%)	(sd)	(mg)	(sd)	(mm)	(sd)				
								(sd)			
Kharkof	59.2	10.9	0.9	28.1	6.8	2.54	0.25	40 21	MIXED	41--26--17--16--03	
Scout 66	59.8	11.2	0.5	29.8	7.8	2.64	0.31	59 17	HARD	06--18--30--46--02	
TAM 107	57.2	11.4	0.4	29.1	8.2	2.61	0.34	63 19	HARD	06--14--19--61--02	
OK09634	59.5	11.3	0.5	29.1	7.4	2.65	0.31	68 18	HARD	03--09--17--71--01	
OK09125	58.4	11.4	0.5	30.4	8.8	2.72	0.37	60 19	HARD	08--16--22--54--02	
OK09528	60.2	11.3	0.5	32.3	8.6	2.75	0.33	65 16	HARD	03--10--25--62--01	
OK09729	59.0	11.6	0.4	31.7	8.9	2.74	0.36	63 15	HARD	03--11--26--60--01	
OK1059060	57.7	11.4	0.5	29.0	9.2	2.60	0.33	61 19	HARD	09--13--24--54--02	
OK09915C	61.0	11.2	0.5	32.9	8.5	2.81	0.34	70 17	HARD	02--06--14--78--01	
KS09H19-2	59.2	11.3	0.4	31.5	8.3	2.70	0.34	65 18	HARD	03--12--21--64--01	
KS10HW78-1-1	60.3	11.3	0.5	31.0	8.1	2.71	0.32	67 16	HARD	04--06--20--70--01	
KS10HW200-2	61.1	11.1	0.5	30.3	7.6	2.68	0.34	63 18	HARD	06--12--21--61--02	
CO07W722-F5	57.1	11.5	0.5	26.8	7.1	2.51	0.30	74 20	HARD	02--07--15--76--01	
CO08263	56.6	11.6	0.4	24.8	7.7	2.45	0.29	60 20	HARD	09--16--20--55--02	
CO08346	60.0	11.3	0.4	26.9	7.6	2.54	0.31	62 18	HARD	07--11--25--57--02	
CO08W218	59.2	11.4	0.5	28.0	8.8	2.51	0.33	65 20	HARD	07--13--18--62--02	
NE10478	59.3	11.3	0.5	27.9	8.5	2.50	0.34	66 18	HARD	04--09--21--66--01	
NE09517	58.6	11.7	0.5	28.0	7.9	2.60	0.31	62 19	HARD	06--14--21--59--02	
NE09521	58.2	11.2	0.6	29.0	8.2	2.61	0.32	64 20	HARD	06--11--20--63--02	
NW09627	56.8	11.5	0.5	26.5	8.6	2.53	0.31	53 19	MIXED	16--21--26--37--03	
HV9W08-0285	59.9	11.5	0.4	26.6	7.3	2.55	0.31	65 18	HARD	03--11--22--64--01	
HV9W08-1624	59.6	11.7	0.5	30.8	7.6	2.74	0.30	65 18	HARD	03--11--25--61--01	
HV9W08-1836	59.1	11.3	0.5	29.2	8.5	2.63	0.32	59 19	MIXED	11--11--25--53--03	
KS030887K-6	60.5	11.2	0.4	28.1	9.0	2.62	0.36	71 19	HARD	02--08--15--75--01	
KS031009K-4	60.1	11.3	0.4	29.0	8.9	2.57	0.33	55 20	MIXED	14--17--25--44--03	
KS050255K-7	59.8	11.4	0.4	30.8	8.3	2.61	0.31	29 21	MIXED	65--18--06--11--03	
K040640K-1	59.0	11.4	0.4	32.6	8.9	2.79	0.33	66 16	HARD	02--11--24--63--01	
LCH08-109	56.7	11.5	0.4	27.6	8.8	2.54	0.35	56 20	MIXED	15--14--24--47--03	
LCH09-19	58.1	11.5	0.4	29.3	7.7	2.53	0.31	56 19	MIXED	13--20--21--46--03	
LCH09-43	56.1	11.5	0.4	30.4	8.2	2.70	0.33	63 18	HARD	05--12--24--59--01	
LCH08-80	57.6	10.5	0.7	25.4	8.1	2.51	0.33	65 19	HARD	07--09--20--64--02	
BL11002	58.5	11.0	0.7	28.6	7.8	2.64	0.33	65 17	HARD	03--11--19--67--01	
TX08A001249	60.5	11.0	0.4	27.4	7.2	2.59	0.32	68 18	HARD	03--10--16--71--01	
TX08V7173	60.9	11.2	0.4	26.2	7.6	2.51	0.29	65 18	HARD	05--12--17--66--01	
TX08V7313	60.9	11.6	0.5	28.5	8.5	2.65	0.35	68 19	HARD	04--10--14--72--01	
TX09A001194	60.7	11.8	0.4	32.9	9.3	2.72	0.34	60 17	HARD	08--13--24--55--02	
TX09A001264	61.2	11.0	0.5	27.8	7.2	2.66	0.33	62 17	HARD	05--14--23--58--01	
TX10A001006	60.1	11.2	0.4	30.8	8.6	2.76	0.35	67 15	HARD	02--05--22--71--01	
TX10A001018	59.8	10.9	0.5	29.1	7.9	2.71	0.33	65 17	HARD	04--08--21--67--01	
TX09D1172	61.2	11.5	0.4	31.2	8.2	2.72	0.33	66 17	HARD	03--09--25--63--01	
TX09D1127	59.4	11.1	0.3	32.2	9.0	2.75	0.34	66 18	HARD	03--10--20--67--01	
N10MD2020	59.1	10.1	0.8	26.2	7.2	2.55	0.31	55 18	MIXED	12--19--29--40--03	
N10MD2073	57.6	9.7	0.8	24.2	7.1	2.48	0.30	53 19	MIXED	14--20--27--39--03	

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LINE	Wheat		Flour			Noodle Color					
	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	15.3	67.2	0.49	13.9	0.638	81.01	-1.97	22.65	-12.79	1.82	2.50
Scout 66	14.4	70.9	0.47	13.1	0.601	79.93	-1.75	22.28	-11.41	1.40	2.11
TAM 107	13.5	67.0	0.45	12.1	0.611	79.58	-1.99	24.18	-10.70	1.27	1.40
OK09634	13.8	67.8	0.46	12.6	0.198	81.16	-2.26	22.67	-9.23	1.35	2.07
OK09125	14.1	70.2	0.43	13.1	0.603	80.25	-2.25	24.50	-11.71	1.37	0.82
OK09528	14.2	66.9	0.45	13.2	0.654	79.93	-1.76	22.82	-11.66	1.34	1.62
OK09729	13.8	69.3	0.44	12.6	0.664	80.03	-1.60	23.09	-10.66	1.30	1.15
OK1059060	14.0	67.0	0.50	12.9	0.769	79.91	-1.91	22.69	-11.70	1.15	2.20
OK09915C	14.7	65.7	0.45	13.2	0.639	80.07	-1.75	21.60	-12.78	1.45	2.06
KS09H19-2	14.3	66.9	0.47	13.0	0.285	80.77	-1.55	22.03	-9.71	1.14	2.87
KS10HW78-1-1	13.5	68.8	0.46	12.3	0.610	80.23	-1.39	20.91	-10.97	1.13	2.01
KS10HW200-2	13.5	68.2	0.43	12.0	0.568	80.50	-2.27	24.10	-10.14	1.11	2.33
CO07W722-F5	13.5	66.4	0.43	12.0	0.268	80.09	-1.86	22.68	-9.23	1.03	2.80
CO08263	13.8	66.2	0.45	12.5	0.675	80.00	-1.94	22.72	-12.53	1.25	2.51
CO08346	13.2	67.1	0.43	12.2	0.737	80.66	-1.97	22.22	-11.14	1.20	1.48
CO08W218	13.3	67.9	0.46	12.1	0.739	81.57	-1.70	21.14	-12.19	1.03	4.19
NE10478	12.8	70.2	0.47	11.7	0.742	81.67	-2.12	21.77	-11.06	1.39	1.88
NE09517	13.5	68.6	0.51	12.1	0.701	81.88	-1.99	21.81	-12.30	1.26	2.41
NE09521	13.5	67.8	0.44	12.4	0.329	81.86	-1.88	22.77	-11.93	2.05	0.86
NW09627	12.9	68.7	0.46	11.8	0.291	83.29	0.24	23.85	-11.62	-1.33	2.41
HV9W08-0285	13.6	67.8	0.41	12.1	0.576	81.02	-2.06	24.19	-10.72	1.29	0.94
HV9W08-1624	13.7	67.3	0.49	12.2	0.677	79.37	-1.06	20.82	-11.77	0.98	2.84
HV9W08-1836	14.0	69.3	0.43	12.9	0.629	79.84	-1.30	23.50	-11.48	0.82	0.44
KS030887K-6	13.7	69.0	0.49	12.6	0.706	81.18	-2.13	23.65	-13.75	1.63	1.26
KS031009K-4	13.3	68.6	0.44	12.3	0.643	82.20	-2.38	23.34	-11.43	1.39	1.83
KS050255K-7	14.8	60.8	0.41	13.2	0.434	81.76	-1.38	20.91	-11.16	0.74	1.63
K040640K-1	14.0	67.9	0.45	12.9	0.454	80.52	-1.78	23.65	-11.27	1.53	-0.09
LCH08-109	13.6	68.4	0.47	12.6	0.740	81.56	-1.65	20.85	-14.03	1.93	3.46
LCH09-19	15.2	68.6	0.46	14.0	0.839	80.04	-1.56	20.51	-13.73	1.21	2.49
LCH09-43	14.0	68.5	0.48	13.0	0.788	80.04	-1.60	23.15	-11.95	1.13	1.93
LCH08-80	13.5	66.3	0.44	12.5	0.677	82.34	-2.14	22.30	-10.60	1.47	1.26
BL11002	13.4	67.7	0.46	12.3	0.328	81.32	-2.26	22.93	-9.21	1.01	2.75
TX08A001249	13.8	67.0	0.43	12.5	0.700	81.05	-1.62	21.24	-12.01	1.08	2.48
TX08V7173	13.5	70.3	0.42	12.4	0.612	80.82	-1.67	21.11	-10.31	0.97	3.38
TX08V7313	13.5	68.4	0.49	11.8	0.740	80.29	-1.92	23.03	-11.14	1.01	2.77
TX09A001194	13.8	68.1	0.47	12.3	0.763	80.76	-1.39	20.31	-13.16	1.32	4.20
TX09A001264	13.8	69.3	0.42	12.3	0.622	81.38	-2.27	22.95	-8.81	1.78	0.27
TX10A001006	14.4	67.5	0.41	13.1	0.612	79.96	-1.94	23.24	-12.28	2.19	-0.67
TX10A001018	14.1	67.2	0.40	12.9	0.614	79.98	-1.89	22.28	-12.06	1.61	1.56
TX09D1172	14.8	68.9	0.43	13.5	0.570	79.62	-1.85	24.57	-12.24	1.22	0.83
TX09D1127	13.9	66.1	0.47	12.6	0.640	79.88	-1.95	23.27	-11.67	1.14	2.48

LINE	Wheat		Flour			Noodle Color					
	Protein	Milling Yield	Ash	Protein	PPO	L @ 0	a @ 0	b @ 0	Delta L 24 hrs	Delta a 24 hrs	Delta b 24 hrs
	(%)	(%)	(%)	(%)							
N10MD2020	14.2	65.8	0.44	13.2	0.762	81.57	-1.89	19.85	-12.78	1.53	2.12
N10MD2073	14.9	66.5	0.43	14.0	0.730	80.97	-2.05	21.61	-12.75	1.32	1.30

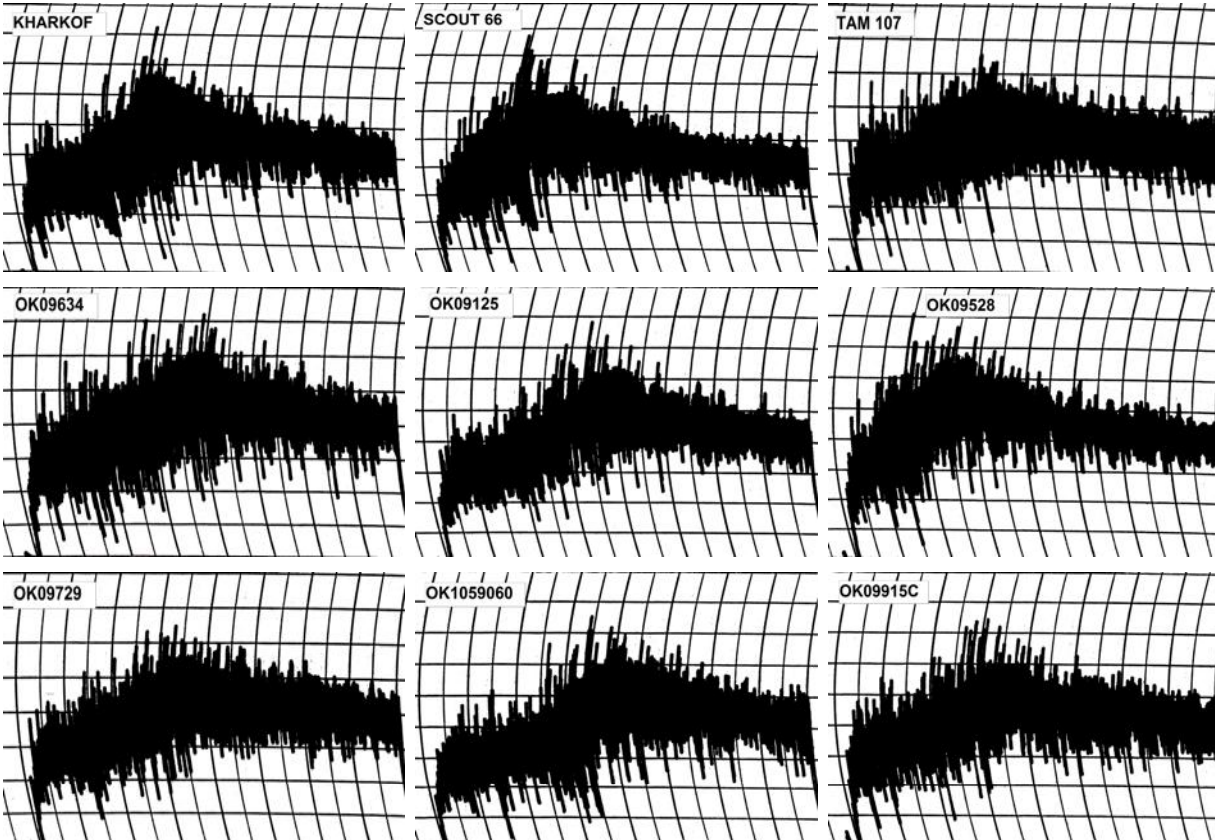
2013 SRPN Intraregional Production Zone

North Central Plains

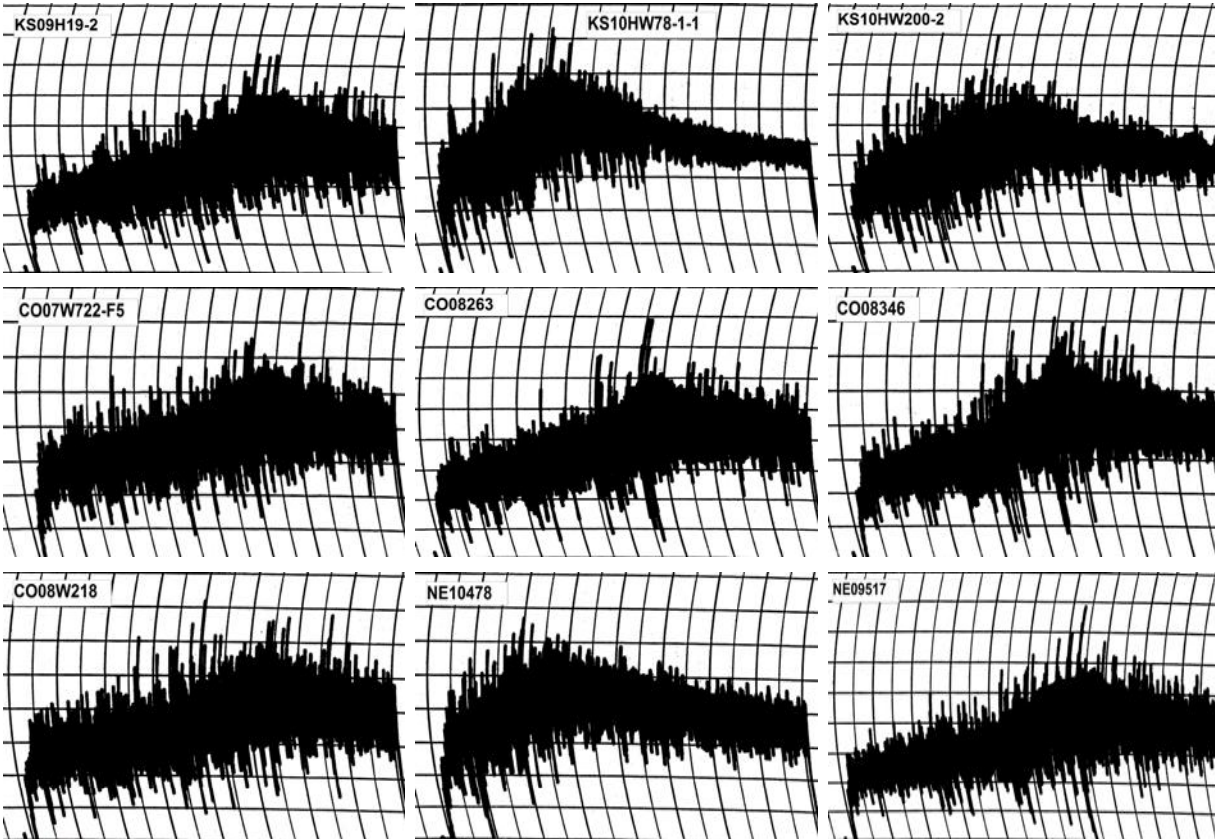
	Flour Protein	Mixograph			
		Absorption	As-Is	Corrected	Tolerance
Line	(%)	(%)	(min)	(min)	
Kharkof	13.9	63.6	3.13	3.13	2
Scout 66	13.1	63.8	2.50	2.50	2
TAM 107	12.1	62.1	3.13	3.13	3
OK09634	12.6	62.9	4.00	4.00	3
OK09125	13.1	63.7	3.88	3.88	2
OK09528	13.2	64.9	2.63	2.63	2
OK09729	12.6	61.9	3.50	3.50	3
OK1059060	12.9	64.5	4.00	4.00	3
OK09915C	13.2	64.5	3.50	3.50	4
KS09H19-2	13.0	64.6	5.63	5.63	5
KS10HW78-1-1	12.3	62.4	2.63	2.63	0
KS10HW200-2	12.0	61.9	3.75	3.74	2
CO07W722-F5	12.0	62.8	5.38	5.35	5
CO08263	12.5	62.8	4.88	4.88	5
CO08346	12.2	62.3	4.75	4.75	4
CO08W218	12.1	62.0	5.38	5.38	4
NE10478	11.7	60.9	2.63	2.53	2
NE09517	12.1	62.1	6.75	6.75	5
NE09521	12.4	63.1	5.00	5.00	4
NW09627	11.8	62.6	4.00	3.91	4
HV9W08-0285	12.1	61.1	4.00	4.00	3
HV9W08-1624	12.2	63.3	4.38	4.38	4
HV9W08-1836	12.9	63.4	5.88	5.88	4
KS030887K-6	12.6	62.9	5.50	5.50	5
KS031009K-4	12.3	63.5	4.13	4.13	4
KS050255K-7	13.2	58.9	3.13	3.13	2
K040640K-1	12.9	61.5	3.88	3.88	3
LCH08-109	12.6	63.0	4.75	4.75	4
LCH09-19	14.0	63.3	3.75	3.75	3
LCH09-43	13.0	62.6	2.50	2.50	2
LCH08-80	12.5	61.2	2.38	2.38	2
BL11002	12.3	61.9	4.50	4.50	3
TX08A001249	12.5	63.7	5.00	5.00	5
TX08V7173	12.4	63.1	4.75	4.75	4
TX08V7313	11.8	61.6	4.00	3.90	4
TX09A001194	12.3	63.0	4.38	4.38	4
TX09A001264	12.3	61.5	4.00	4.00	3
TX10A001006	13.1	63.3	2.13	2.13	2
TX10A001018	12.9	64.0	2.25	2.25	1
TX09D1172	13.5	64.0	3.13	3.13	2
TX09D1127	12.6	62.3	4.25	4.25	4
N10MD2020	13.2	62.9	4.38	4.38	4

	Flour Protein	Mixograph			
		Absorption	As-Is	Corrected	Tolerance
Line	(%)	(%)	(min)	(min)	
N10MD2073	14.0	63.2	3.50	3.50	2

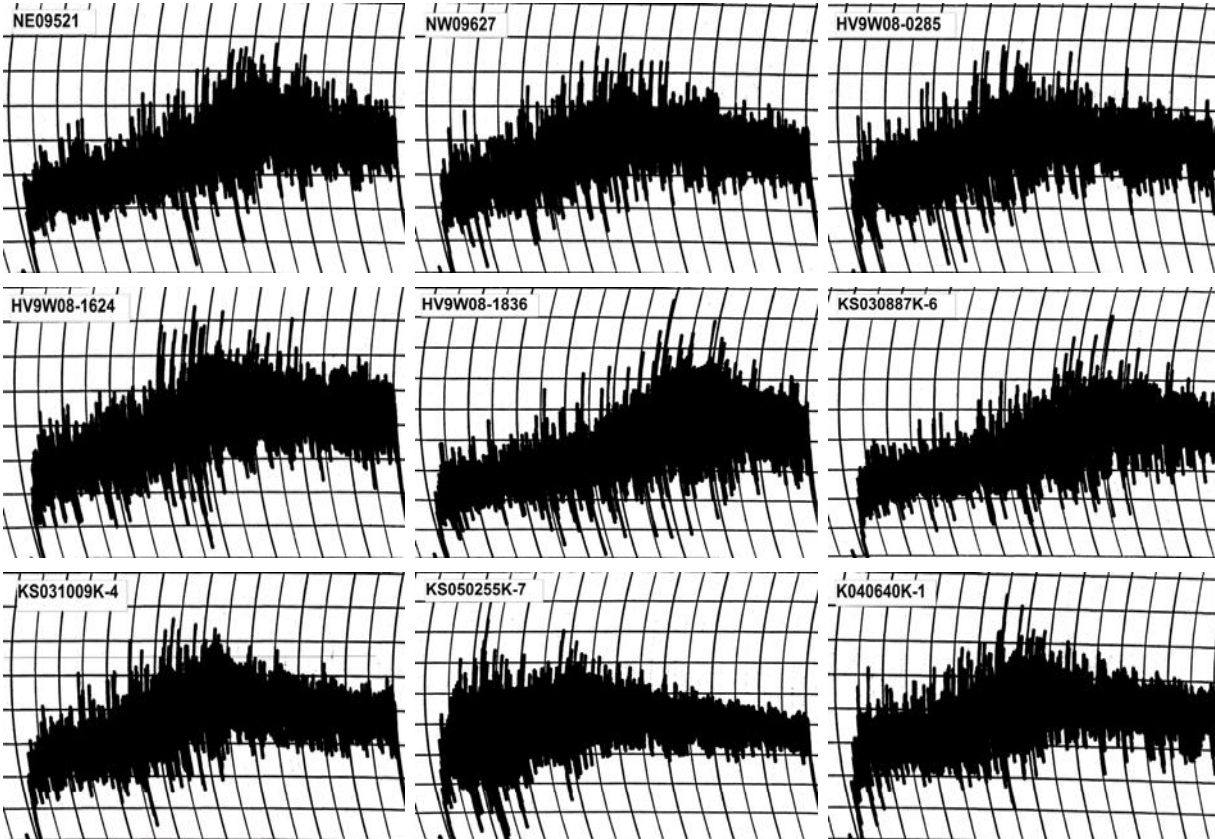
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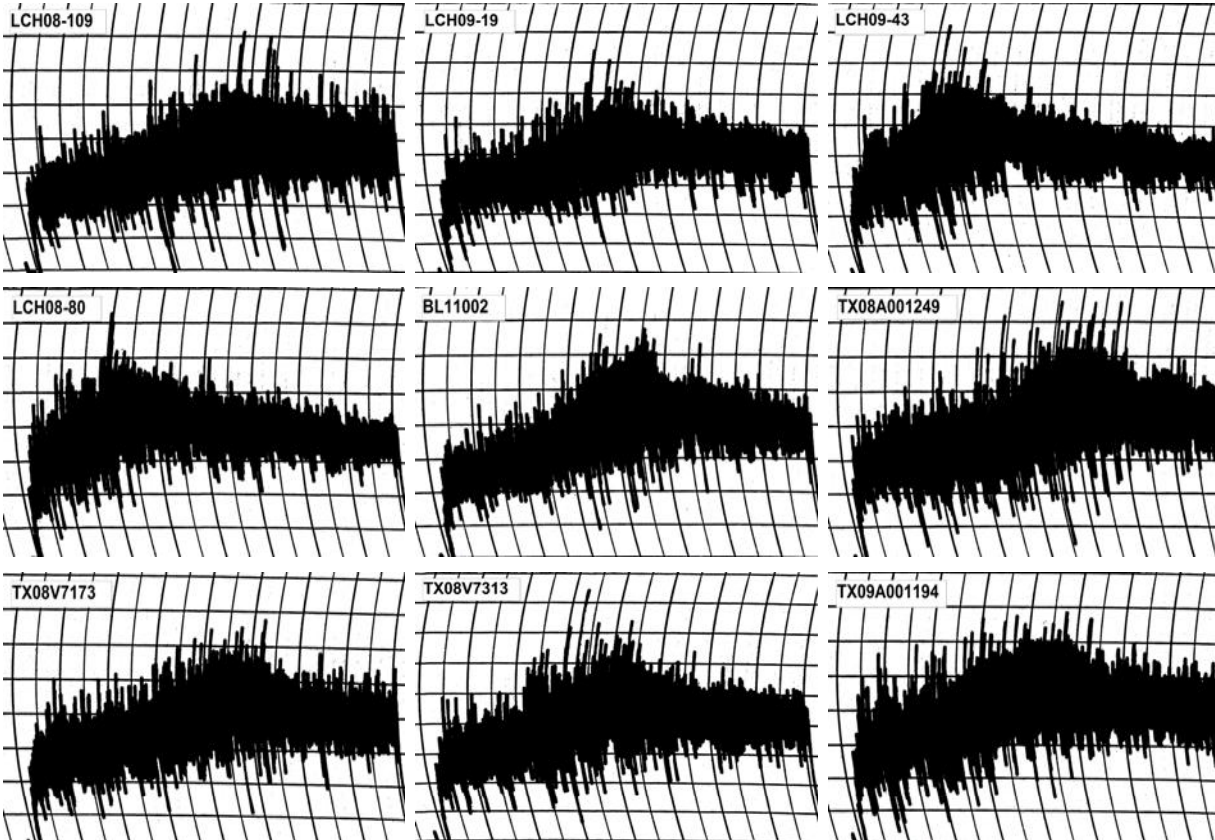
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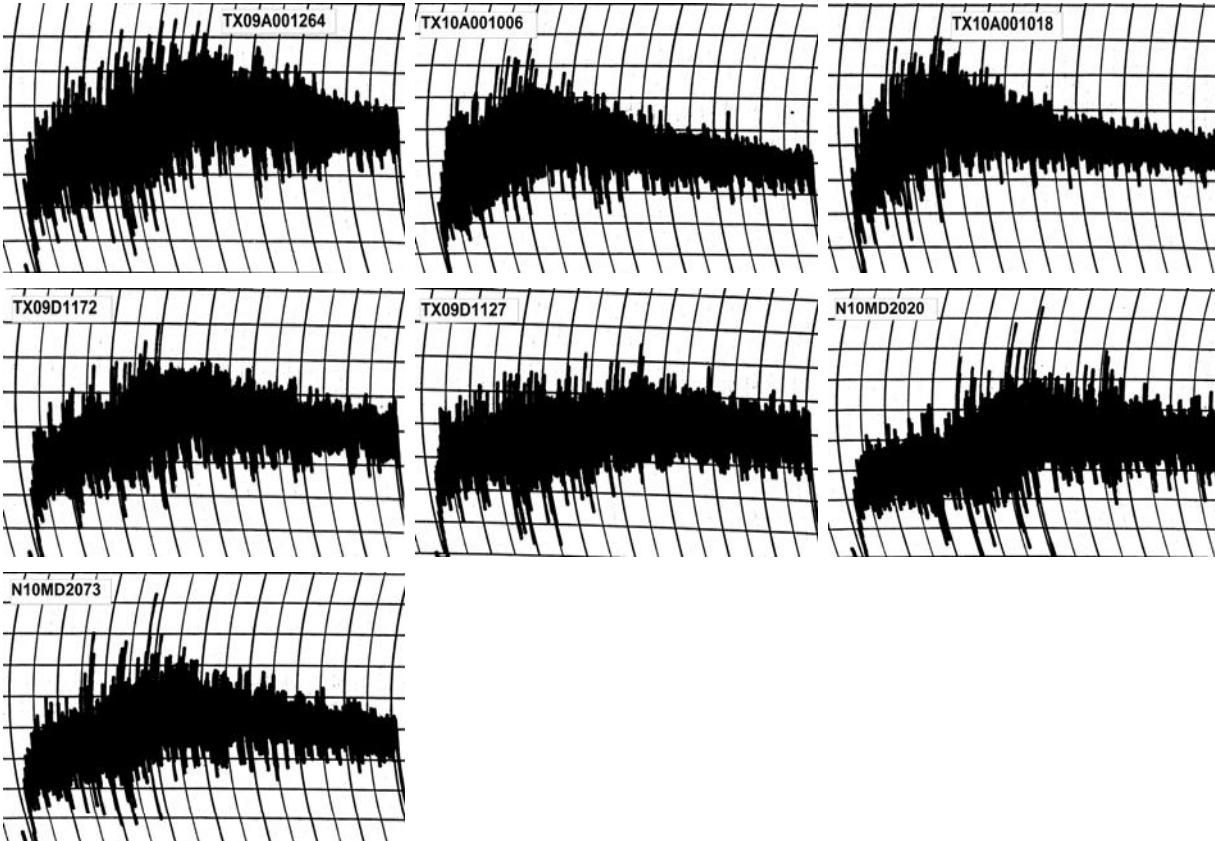
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Line	RVA						
	Stirring Number (RVU)	Peak Viscosity (RVU)	Trough Viscosity (RVU)	Breakdown (RVU)	Final Viscosity (RVU)	Set back (RVU)	Peak Time (min)
Kharkof	152.50	239.25	166.25	73.00	271.58	105.33	6.47
Scout 66	136.67	232.42	161.17	71.25	276.75	115.58	6.33
TAM 107	141.08	270.92	195.75	75.17	315.83	120.08	6.60
OK09634	138.75	245.75	169.08	76.67	282.42	113.33	6.40
OK09125	128.75	247.00	171.50	75.50	291.17	119.67	6.33
OK09528	118.25	251.50	159.25	92.25	263.50	104.25	6.33
OK09729	137.83	217.92	154.00	63.92	265.75	111.75	6.33
OK1059060	141.50	237.83	163.08	74.75	281.75	118.67	6.33
OK09915C	141.83	240.83	172.25	68.58	287.50	115.25	6.40
KS09H19-2	130.00	237.00	152.50	84.50	262.42	109.92	6.27
KS10HW78-1-1	109.67	191.50	97.75	93.75	176.67	78.92	6.00
KS10HW200-2	110.00	156.00	77.17	78.83	153.42	76.25	5.80
CO07W722-F5	118.17	171.33	101.42	69.92	196.00	94.58	6.00
CO08263	128.00	257.17	161.42	95.75	271.00	109.58	6.40
CO08346	122.58	275.17	170.58	104.58	277.58	107.00	6.47
CO08W218	134.25	174.25	100.08	74.17	185.50	85.42	6.00
NE10478	139.00	211.25	143.25	68.00	253.67	110.42	6.20
NE09517	101.58	231.25	144.42	86.83	265.08	120.67	6.07
NE09521	139.83	237.83	159.50	78.33	277.67	118.17	6.27
NW09627	99.83	161.00	75.00	86.00	155.50	80.50	5.67
HV9W08-0285	114.50	226.42	143.42	83.00	250.92	107.50	6.13
HV9W08-1624	134.00	223.00	147.75	75.25	258.25	110.50	6.27
HV9W08-1836	122.58	223.67	153.50	70.17	272.92	119.42	6.20
KS030887K-6	133.42	217.33	143.75	73.58	253.42	109.67	6.27
KS031009K-4	107.83	234.83	159.25	75.58	281.58	122.33	6.27
KS050255K-7	137.67	230.50	155.83	74.67	261.75	105.92	6.40
K040640K-1	146.08	230.33	159.00	71.33	276.58	117.58	6.33
LCH08-109	122.08	219.42	143.08	76.33	251.42	108.33	6.27
LCH09-19	146.00	253.83	177.08	76.75	289.00	111.92	6.53
LCH09-43	132.50	232.67	152.08	80.58	270.08	118.00	6.27
LCH08-80	127.08	256.58	162.33	94.25	281.00	118.67	6.33
BL11002	122.25	253.75	164.17	89.58	278.00	113.83	6.33
TX08A001249	145.33	281.17	186.33	94.83	304.17	117.83	6.47
TX08V7173	127.83	274.50	177.83	96.67	290.67	112.83	6.40
TX08V7313	130.83	252.50	171.50	81.00	287.25	115.75	6.40
TX09A001194	123.75	254.33	165.92	88.42	284.58	118.67	6.33
TX09A001264	125.58	261.50	166.83	94.67	286.17	119.33	6.27
TX10A001006	120.17	252.17	177.75	74.42	309.50	131.75	6.33
TX10A001018	130.92	241.50	174.33	67.17	308.83	134.50	6.33
TX09D1172	118.17	239.67	153.08	86.58	266.67	113.58	6.20
TX09D1127	135.92	266.08	185.25	80.83	319.67	134.42	6.33
N10MD2020	158.42	272.92	185.17	87.75	298.42	113.25	6.53
N10MD2073	140.08	259.25	174.92	84.33	297.58	122.67	6.33

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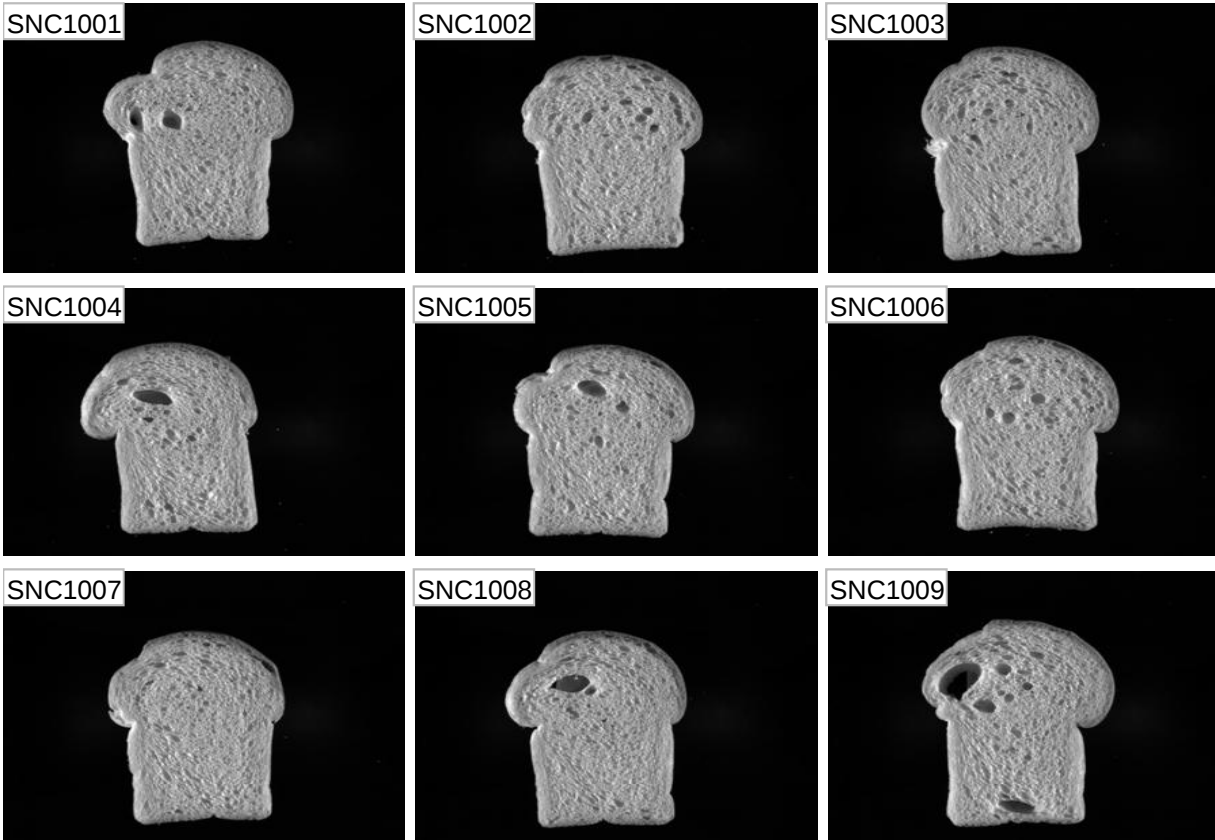
North Central Plains

Line	Flour		Mix Time		Dough					
	Protein	Water Abs.	As-is	Corrected	Weight	Proof Height	Crumb Grain	As-Rec'd.	Specific Volume	Loaf Volume Potential
	(%)	(%)	(min)	(min)	(g)	(cm)		(cc)	(cc/g)	(cc/%)
Kharkof	13.9	63.8	5.00	5.00	173.4	7.4	4.5	950	6.3	60
Scout 66	13.1	63.6	3.25	3.25	173.1	7.4	4.0	905	6.0	60
TAM 107	12.1	62.8	4.50	4.50	172.4	7.4	5.0	985	6.6	75
OK09634	12.6	63.9	5.25	5.25	173.3	7.1	4.0	965	6.5	69
OK09125	13.1	63.2	4.25	4.25	172.9	7.0	3.0	915	6.1	61
OK09528	13.2	64.9	3.00	3.00	174.8	7.0	2.0	910	6.0	60
OK09729	12.6	60.8	3.75	3.75	170.4	6.9	4.0	880	6.0	60
OK1059060	12.9	63.6	5.38	5.38	172.7	7.0	3.5	920	6.2	62
OK09915C	13.2	64.0	4.75	4.75	176.1	7.3	3.0	1005	6.6	69
KS09H19-2	13.0	64.0	7.75	7.75	173.3	7.1	5.0	930	6.2	63
KS10HW78-1-1	12.3	61.9	3.25	3.25	171.5	7.1	4.0	860	5.8	60
KS10HW200-2	12.0	63.6	4.00	3.99	173.2	7.1	5.0	895	6.0	66
CO07W722-F5	12.0	63.2	6.75	6.71	174.2	7.0	3.5	845	5.6	61
CO08263	12.5	63.3	6.50	6.50	172.6	7.4	5.0	955	6.4	69
CO08346	12.2	62.9	6.00	6.00	172.2	7.0	4.5	935	6.3	69
CO08W218	12.1	62.9	7.00	7.00	172.7	6.9	4.0	885	5.8	65
NE10478	11.7	60.8	3.38	3.26	170.8	6.9	3.0	840	5.6	62
NE09517	12.1	63.1	10.00	10.00	171.8	7.4	4.5	955	6.5	72
NE09521	12.4	63.2	6.75	6.75	172.7	7.0	4.5	910	6.0	65
NW09627	11.8	63.8	5.50	5.37	173.1	7.1	5.0	930	6.2	72
HV9W08-0285	12.1	63.1	5.25	5.25	172.8	7.3	4.0	930	6.2	69
HV9W08-1624	12.2	63.8	6.25	6.25	172.9	7.0	4.5	885	5.9	63
HV9W08-1836	12.9	63.5	7.75	7.75	172.0	7.6	5.0	990	6.7	70
KS030887K-6	12.6	63.0	7.50	7.50	171.6	7.4	4.5	1035	7.0	77
KS031009K-4	12.3	62.1	4.88	4.88	171.5	7.3	4.5	990	6.8	74
KS050255K-7	13.2	59.8	4.38	4.38	169.2	7.4	4.5	975	6.7	66
K040640K-1	12.9	63.0	5.00	5.00	171.9	7.4	4.0	975	6.6	68
LCH08-109	12.6	61.9	7.13	7.13	170.6	7.2	5.0	970	6.6	70
LCH09-19	14.0	61.9	5.25	5.25	171.4	7.5	4.5	1025	6.9	66
LCH09-43	13.0	61.7	3.25	3.25	171.5	6.8	1.5	855	5.7	56
LCH08-80	12.5	61.1	3.25	3.25	170.1	7.1	2.0	945	6.4	68
BL11002	12.3	61.7	5.38	5.38	170.6	7.1	3.5	950	6.5	70
TX08A001249	12.5	64.6	6.75	6.75	173.9	7.6	4.0	1050	7.0	79
TX08V7173	12.4	63.2	5.63	5.63	172.6	7.2	3.0	975	6.6	72
TX08V7313	11.8	64.0	6.00	5.85	173.1	7.3	3.0	965	6.5	76
TX09A001194	12.3	62.8	6.00	6.00	172.5	7.5	4.5	1025	7.0	78
TX09A001264	12.3	63.2	4.38	4.38	172.6	7.7	4.5	1025	7.0	78
TX10A001006	13.1	62.0	2.75	2.75	171.2	7.3	2.5	850	5.7	54
TX10A001018	12.9	61.0	2.50	2.50	170.3	7.1	2.0	800	5.3	50
TX09D1172	13.5	62.7	3.75	3.75	172.3	7.6	5.0	1030	6.9	69
TX09D1127	12.6	62.6	5.13	5.13	171.6	7.4	3.5	1025	6.9	76
N10MD2020	13.2	63.5	6.25	6.25	172.6	7.5	5.0	985	6.6	67
N10MD2073	14.0	64.1	4.50	4.50	174.1	7.3	4.0	960	6.3	60

LIST of SRPN SAMPLE ID

Entry	Breeder ID	HWWQL ID			
		North Central Plains	Northern High Plains	South Central Plains	Southern High Plains
1	Kharkof	13-SNC1001	13-SNH1001	13-SSC1001	13-SSH1001
2	Scout 66	13-SNC1002	13-SNH1002	13-SSC1002	13-SSH1002
3	TAM 107	13-SNC1003	13-SNH1003	13-SSC1003	13-SSH1003
4	OK09634	13-SNC1004	13-SNH1004	13-SSC1004	13-SSH1004
5	OK09125	13-SNC1005	13-SNH1005	13-SSC1005	13-SSH1005
6	OK09528	13-SNC1006	13-SNH1006	13-SSC1006	13-SSH1006
7	OK09729	13-SNC1007	13-SNH1007	13-SSC1007	13-SSH1007
8	OK1059060	13-SNC1008	13-SNH1008	13-SSC1008	13-SSH1008
9	OK09915C	13-SNC1009	13-SNH1009	13-SSC1009	13-SSH1009
10	KS09H19-2	13-SNC1010	13-SNH1010	13-SSC1010	13-SSH1010
11	KS10HW78-1-1	13-SNC1011	13-SNH1011	13-SSC1011	13-SSH1011
12	KS10HW200-2	13-SNC1012	13-SNH1012	13-SSC1012	13-SSH1012
13	CO07W722-F5	13-SNC1013	13-SNH1013	13-SSC1013	13-SSH1013
14	CO08263	13-SNC1014	13-SNH1014	13-SSC1014	13-SSH1014
15	CO08346	13-SNC1015	13-SNH1015	13-SSC1015	13-SSH1015
16	CO08W218	13-SNC1016	13-SNH1016	13-SSC1016	13-SSH1016
17	NE10478	13-SNC1017	13-SNH1017	13-SSC1017	13-SSH1017
18	NE09517	13-SNC1018	13-SNH1018	13-SSC1018	13-SSH1018
19	NE09521	13-SNC1019	13-SNH1019	13-SSC1019	13-SSH1019
20	NW09627	13-SNC1020	13-SNH1020	13-SSC1020	13-SSH1020
21	HV9W08-0285	13-SNC1021	13-SNH1021	13-SSC1021	13-SSH1021
22	HV9W08-1624	13-SNC1022	13-SNH1022	13-SSC1022	13-SSH1022
23	HV9W08-1836	13-SNC1023	13-SNH1023	13-SSC1023	13-SSH1023
24	KS030887K-6	13-SNC1024	13-SNH1024	13-SSC1024	13-SSH1024
25	KS031009K-4	13-SNC1025	13-SNH1025	13-SSC1025	13-SSH1025
26	KS050255K-7	13-SNC1026	13-SNH1026	13-SSC1026	13-SSH1026
27	K040640K-1	13-SNC1027	13-SNH1027	13-SSC1027	13-SSH1027
28	LCH08-109	13-SNC1028	13-SNH1028	13-SSC1028	13-SSH1028
29	LCH09-19	13-SNC1029	13-SNH1029	13-SSC1029	13-SSH1029
30	LCH09-43	13-SNC1030	13-SNH1030	13-SSC1030	13-SSH1030
31	LCH08-80	13-SNC1031	13-SNH1031	13-SSC1031	13-SSH1031
32	BL11002	13-SNC1032	13-SNH1032	13-SSC1032	13-SSH1032
33	TX08A001249	13-SNC1033	13-SNH1033	13-SSC1033	13-SSH1033
34	TX08V7173	13-SNC1034	13-SNH1034	13-SSC1034	13-SSH1034
35	TX08V7313	13-SNC1035	13-SNH1035	13-SSC1035	13-SSH1035
36	TX09A001194	13-SNC1036	13-SNH1036	13-SSC1036	13-SSH1036
37	TX09A001264	13-SNC1037	13-SNH1037	13-SSC1037	13-SSH1037
38	TX10A001006	13-SNC1038	13-SNH1038	13-SSC1038	13-SSH1038
39	TX10A001018	13-SNC1039	13-SNH1039	13-SSC1039	13-SSH1039
40	TX09D1172	13-SNC1040	13-SNH1040	13-SSC1040	13-SSH1040
41	TX09D1127	13-SNC1041	13-SNH1041	13-SSC1041	13-SSH1041
42	N10MD2020	13-SNC1042	13-SNH1042	13-SSC1042	13-SSH1042
43	N10MD2073	13-SNC1043	13-SNH1043	13-SSC1043	13-SSH1043

2013 SRPN Intraregional Production Zone North Central Plains



2013 SRPN Intraregional Production Zone North Central Plains

SNC1010



SNC1011



SNC1012



SNC1013



SNC1014



SNC1015



SNC1016



SNC1017



SNC1018



2013 SRPN Intraregional Production Zone North Central Plains

SNC1019



SNC1020



SNC1021



SNC1022



SNC1023



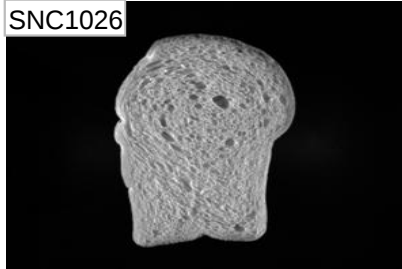
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SNC1025



SNC1026



SNC1027



2013 SRPN Intraregional Production Zone North Central Plains

SNC1028



SNC1029



SNC1030



SNC1031



SNC1032



SNC1033



SNC1034



SNC1035



SNC1036



2013 SRPN Intraregional Production Zone North Central Plains

SNC1037



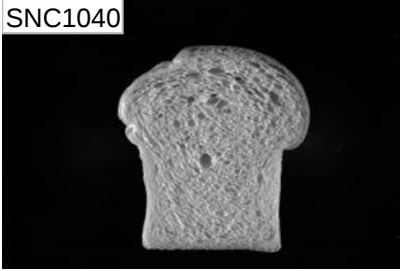
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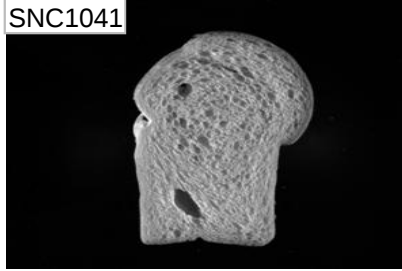
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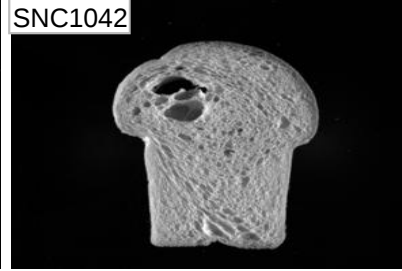
SNC1040



SNC1041



SNC1042



SNC1043





Hard Winter Wheat Quality Report 2013 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
KS030887K-6	45.4	Very Good	100.0	63.2	Very Good	100.0		9,16,
NE09517	45.3	Very Good	99.7	44.1	Average	69.8		9,16,
OK09125	44.8	Very Good	98.5	50.7	Very Good	80.2		16,
Oakley CL	44.5	Very Good	98.0	54.1	Very Good	85.7		16,
KS031009K-4	44.1	Very Good	97.1	36.0	Poor	57.0		16,
TX08V7313	44.0	Very Good	96.9	59.3	Very Good	93.8		10,11,16,
TX09A001264	43.6	Very Good	95.9	50.9	Good	80.5		15,16,
Scout 66	43.2	Very Good	95.1	48.6	Good	76.9		16,
NE10478	42.2	Good	92.9	29.1	Very Poor	46.0		14,15,16,21,
OK09729	41.9	Good	92.3	29.6	Very Poor	46.9		5,13,14,16,21,
TX09D1172	41.9	Good	92.2	49.6	Good	78.4		15,16,
HV9W08-1836	41.8	Good	91.9	46.0	Good	72.7		16,
HV9W08-1624	41.2	Good	90.7	54.6	Very Good	86.4		16,
LCS Wizard	41.0	Good	90.3	24.8	Very Poor	39.3		12,13,14,15,16,17,18,21,
CO08346	41.0	Good	90.1	46.9	Good	74.3		16,21,
KS10HW200-2	40.9	Good	90.1	33.6	Poor	53.2		16,21,
OK09634	40.9	Good	90.1	48.9	Good	77.4		16,
TX08V7173	40.5	Average	89.1	43.6	Average	68.9		16,
TAM 107	40.4	Average	88.8	31.6	Very Poor	50.0	1AL	11,15,16,21,
Doublestop CL Plus	40.3	Average	88.8	39.8	Poor	63.0		3,5,16,
HV9W08-0285	40.2	Average	88.5	33.4	Poor	52.8		15,16,21,
OK1059060	39.9	Average	87.9	48.9	Good	77.3		16,
CO08W218	39.5	Average	87.0	53.6	Very Good	84.9		16,
OK09528	39.5	Average	86.8	33.6	Poor	53.1		14,15,16,20,21,
TX10A001018	38.4	Poor	84.6	29.3	Very Poor	46.4		14,15,16,19,20,21,
KS10HW78-1-1	38.4	Poor	84.5	37.0	Poor	58.5		16,21,
NE09521	38.3	Poor	84.4	44.9	Average	71.1		16,
CO08263	38.3	Average	84.3	39.9	Poor	63.2		2,16,
TX09A001194	37.6	Poor	82.8	48.9	Good	77.4		3,16,
NW09627	37.6	Poor	82.7	39.3	Poor	62.2		1,16,18,

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 2013 SRPN-NHP

1 - Test weight
2 - SKCS kernel weight
3 - Kernel weight SD
4 - SKCS kernel diameter
5 - Kernel diameter SD
6 - SKCS hardness
7 - Hardness SD
8 - Flour yield
9 - Flour ash
10 - Milling score

10
8
8
8
8
10
8
30
10

11 - Flour protein
12 - Bake absorption
13 - Mixograph absorption
14 - Bake mix time
15 - Mixograph mix time
16 - Mixograph tolerance
17 - Dough weight
18 - Proof height
19 - Loaf volume
20 - Volume regression
21 - Crumb grain

8
15
5
10
5
5
2
20
5
25

ID	Milling		Baking				Trait	
	Score	Rating	%	Score	Rating	%	1RS	Deficiencies
BL11002	37.5	Poor	82.6	43.3	Average	68.5		16,
TX10A001006	37.5	Poor	82.5	30.8	Very Poor	48.7		14,15,16,21,
K040640K-1	35.9	Poor	79.0	40.8	Average	64.5		16,
CO07W722-F5	35.6	Poor	78.3	46.6	Good	73.8		16,
LCH09-43	34.6	Very Poor	76.2	23.9	Very Poor	37.9		1,12,14,15,16,17,18,19,20,21
TX08A001249	34.5	Very Poor	75.9	60.7	Very Good	96.1	1AL	16,
TX09D1127	34.3	Very Poor	75.6	44.4	Average	70.3		11,13,16,
LCH09-19	33.7	Very Poor	74.1	34.1	Poor	54.0		4,14,16,
LCH08-109	31.8	Very Poor	70.1	41.9	Average	66.3		1,9,16,
N10MD2020	31.7	Very Poor	69.7	60.3	Very Good	95.4		16,
Kharkof	30.9	Very Poor	68.0	43.7	Average	69.2		8,10,16,21,
N10MD2073	28.5	Very Poor	62.8	31.7	Very Poor	50.2		12,14,16,17,21,
KS050255K-7	23.1	Very Poor	50.8	29.1	Very Poor	46.1		6,8,10,12,13,14,15,16,17,21,

2013 SRPN Intraregional Production Zone

Northern High Plains

LINE	Wt/Bu (lb)	SKCS Average Kernel						Hardness			
		Moisture		Weight		Diameter		SKCS	Class	Distribution	
		(%)	(sd)	(mg)	(sd)	(mm)	(sd)				
								(sd)			
Kharkof	58.7	12.5	0.5	25.6	7.2	2.42	0.28	53 21	MIXED	17--22--25--36--03	
Scout 66	57.0	12.7	0.6	27.6	9.3	2.49	0.33	62 19	HARD	05--15--25--55--01	
TAM 107	56.9	12.4	0.6	27.2	8.8	2.49	0.36	71 17	HARD	01--07--17--75--01	
OK09634	56.0	12.3	0.6	24.9	8.5	2.44	0.34	68 18	HARD	02--07--26--65--01	
OK09125	55.7	12.5	0.6	29.3	8.6	2.63	0.33	59 18	HARD	04--21--28--47--01	
OK09528	57.7	12.5	0.6	26.9	8.7	2.52	0.35	68 19	HARD	03--09--19--69--01	
OK09729	56.0	12.4	0.6	28.2	9.8	2.58	0.39	67 18	HARD	02--09--24--65--01	
OK1059060	56.8	12.4	0.7	27.0	9.5	2.47	0.32	63 19	HARD	04--15--27--54--01	
OK09915C	58.6	12.5	0.6	30.7	10.5	2.63	0.38	70 16	HARD	01--04--18--77--01	
KS09H19-2	58.5	12.3	0.6	29.8	9.8	2.60	0.37	76 16	HARD	01--02--11--86--01	
KS10HW78-1-1	57.3	12.4	0.6	26.3	9.4	2.48	0.36	69 19	HARD	04--08--17--71--01	
KS10HW200-2	58.3	12.1	0.6	26.8	9.5	2.50	0.36	70 18	HARD	02--08--17--73--01	
CO07W722-F5	55.6	12.4	0.6	25.1	10.1	2.40	0.34	71 19	HARD	03--06--17--74--01	
CO08263	56.1	12.1	0.6	24.1	8.8	2.43	0.32	62 20	HARD	07--13--27--53--02	
CO08346	58.5	12.1	0.6	25.4	8.6	2.40	0.31	65 19	HARD	03--12--27--58--01	
CO08W218	57.7	12.3	0.7	28.2	10.0	2.48	0.35	66 21	HARD	04--15--16--65--01	
NE10478	56.7	12.2	0.8	26.5	9.2	2.43	0.34	64 19	HARD	04--14--22--60--01	
NE09517	58.6	12.4	0.8	29.2	9.9	2.58	0.35	64 19	HARD	05--11--22--62--01	
NE09521	55.4	12.3	0.7	27.5	9.8	2.48	0.34	59 18	HARD	06--18--25--51--02	
NW09627	54.8	12.4	0.7	25.3	9.4	2.42	0.37	56 20	HARD	10--23--25--42--02	
HV9W08-0285	57.1	12.1	0.7	24.4	8.6	2.39	0.33	67 21	HARD	06--07--23--64--02	
HV9W08-1624	57.5	12.4	0.7	28.1	9.5	2.55	0.36	61 19	HARD	05--16--30--49--01	
HV9W08-1836	56.4	12.1	0.7	25.7	8.2	2.47	0.32	59 18	HARD	09--13--32--46--02	
KS030887K-6	58.1	12.1	0.7	27.0	8.8	2.52	0.37	70 19	HARD	05--06--16--73--01	
KS031009K-4	58.8	12.2	0.6	26.9	9.2	2.45	0.34	59 19	HARD	07--18--25--50--02	
KS050255K-7	56.2	12.1	0.7	26.9	8.4	2.42	0.33	36 23	MIXED	51--17--14--18--03	
K040640K-1	56.0	12.4	0.7	27.7	9.0	2.55	0.36	67 21	HARD	06--07--21--66--02	
LCH08-109	54.8	12.2	0.6	25.4	9.1	2.40	0.34	51 21	MIXED	18--24--24--34--03	
LCH09-19	55.5	12.2	0.7	26.9	9.9	2.38	0.35	57 19	HARD	09--19--25--47--02	
LCH09-43	53.3	12.0	0.6	27.1	9.3	2.51	0.36	62 21	HARD	08--14--26--52--02	
LCH08-80	57.2	12.1	0.6	25.0	7.9	2.45	0.32	67 18	HARD	02--10--22--66--01	
BL11002	56.3	12.3	0.7	26.8	9.2	2.49	0.34	65 19	HARD	04--13--25--58--01	
TX08A001249	57.8	12.7	0.5	25.5	9.3	2.43	0.35	70 19	HARD	02--09--17--72--01	
TX08V7173	57.8	12.3	0.6	25.4	8.3	2.41	0.31	64 20	HARD	06--11--25--58--02	
TX08V7313	60.0	12.5	0.8	26.1	8.3	2.50	0.32	76 17	HARD	01--04--13--82--01	
TX09A001194	58.5	12.3	0.7	27.7	10.3	2.47	0.34	73 18	HARD	01--06--18--75--01	
TX09A001264	58.5	11.8	0.7	25.4	8.1	2.49	0.33	69 19	HARD	02--08--22--68--01	
TX10A001006	55.8	12.0	0.7	25.6	8.7	2.49	0.35	70 17	HARD	02--08--16--74--01	
TX10A001018	56.7	12.2	0.6	25.2	9.1	2.51	0.37	70 18	HARD	02--08--18--72--01	
TX09D1172	57.9	12.1	0.8	26.8	7.7	2.47	0.30	72 18	HARD	01--06--18--75--01	
TX09D1127	57.1	12.1	0.9	27.6	10.0	2.49	0.36	66 18	HARD	03--12--22--63--01	
N10MD2020	57.0	12.0	0.6	24.3	8.1	2.38	0.32	61 23	HARD	10--21--22--47--02	
N10MD2073	56.1	11.7	0.6	24.6	8.8	2.42	0.32	55 23	MIXED	18--18--21--43--03	

2013 SRPN Intraregional Production Zone

Northern High Plains

LINE	Wheat		Flour			Noodle Color					
	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	16.5	58.9	0.46	15.0	0.521	80.71	-2.08	21.67	-13.40	1.68	-0.05
Scout 66	15.6	66.1	0.44	14.6	0.592	79.85	-1.81	23.43	-11.74	1.76	-0.32
TAM 107	15.7	63.4	0.46	14.0	0.532	78.52	-1.68	24.87	-15.45	2.09	-0.31
OK09634	15.8	65.1	0.45	14.8	0.230	79.47	-1.98	24.83	-12.64	1.79	-0.97
OK09125	15.1	66.0	0.40	14.1	0.497	81.71	-2.16	23.47	-15.49	2.28	-0.36
OK09528	16.4	62.8	0.44	15.4	0.501	80.80	-2.14	24.61	-15.77	1.81	-1.07
OK09729	15.8	66.0	0.47	15.0	0.519	78.45	-1.35	22.97	-17.93	1.74	0.07
OK1059060	16.6	65.3	0.48	15.6	0.584	79.35	-1.64	23.66	-16.81	1.47	-0.11
OK09915C	16.3	62.4	0.47	15.1	0.509	79.10	-1.88	23.55	-16.45	2.05	-2.02
KS09H19-2	15.5	64.4	0.48	14.4	0.198	79.45	-1.59	24.05	-12.19	2.69	-0.73
KS10HW78-1-1	15.7	64.0	0.49	14.7	0.559	79.52	-2.00	24.08	-15.64	1.78	-1.49
KS10HW200-2	15.4	63.5	0.43	14.3	0.512	80.06	-2.61	25.38	-14.34	2.08	0.00
CO07W722-F5	15.6	63.3	0.44	14.4	0.272	80.84	-1.85	23.43	-13.64	1.39	2.40
CO08263	15.1	64.9	0.45	14.2	0.666	79.48	-1.98	23.80	-16.73	1.55	-0.25
CO08346	15.7	63.9	0.43	14.7	0.670	79.36	-2.15	23.73	-13.15	2.21	-0.32
CO08W218	15.3	65.2	0.48	14.2	0.659	80.95	-2.03	23.02	-15.93	2.05	1.92
NE10478	15.3	67.1	0.49	14.4	0.601	78.63	-1.90	24.19	-14.78	1.67	-0.92
NE09517	15.4	67.4	0.50	14.3	0.634	79.10	-2.22	24.38	-14.54	1.77	-0.72
NE09521	15.9	65.3	0.48	15.0	0.311	79.55	-1.63	24.67	-12.97	1.68	0.91
NW09627	15.0	66.9	0.48	14.4	0.329	81.50	-2.70	26.41	-13.68	2.14	0.70
HV9W08-0285	15.4	65.3	0.44	14.4	0.529	79.09	-2.23	25.22	-13.46	2.00	-0.52
HV9W08-1624	15.8	65.5	0.47	14.7	0.572	78.41	-1.27	23.24	-15.92	2.21	-0.96
HV9W08-1836	15.6	66.2	0.47	14.9	0.627	79.00	-2.30	24.75	-17.08	2.50	-2.00
KS030887K-6	15.4	67.5	0.51	14.4	0.569	78.65	-2.18	24.36	-14.02	2.62	-1.91
KS031009K-4	15.2	66.8	0.46	14.3	0.488	78.56	-1.88	24.29	-16.80	2.74	-2.07
KS050255K-7	17.0	55.0	0.46	15.6	0.415	78.38	-1.70	23.31	-15.59	2.45	-3.57
K040640K-1	15.8	63.6	0.50	14.7	0.343	78.11	-1.91	25.28	-13.93	1.72	-1.33
LCH08-109	15.2	64.5	0.50	14.4	0.593	78.92	-1.77	24.32	-13.29	2.01	-0.36
LCH09-19	16.5	63.8	0.50	15.7	0.705	77.74	-1.64	21.99	-17.51	2.10	-1.64
LCH09-43	15.8	64.9	0.49	15.0	0.681	77.60	-1.76	24.16	-16.40	2.05	-1.46
LCH08-80	15.5	64.4	0.48	14.5	0.541	79.34	-1.75	23.95	-12.50	1.89	-1.18
BL11002	16.1	63.7	0.46	15.2	0.283	81.00	-2.04	25.40	-11.44	1.67	0.62
TX08A001249	16.0	61.2	0.47	14.7	0.510	78.58	-1.68	24.28	-13.92	2.23	-0.57
TX08V7173	16.0	64.5	0.45	15.1	0.538	78.92	-1.78	24.08	-11.84	2.09	-0.11
TX08V7313	15.7	63.5	0.49	13.9	0.581	79.33	-2.01	24.51	-12.54	2.47	-1.30
TX09A001194	15.6	62.6	0.49	14.6	0.540	79.91	-1.48	22.09	-16.40	1.48	0.96
TX09A001264	16.4	65.4	0.48	15.2	0.514	77.41	-1.57	24.33	-16.42	2.65	-2.57
TX10A001006	16.8	62.5	0.46	15.6	0.480	78.02	-1.89	24.91	-17.76	2.07	-2.03
TX10A001018	16.0	63.1	0.44	15.2	0.490	79.76	-1.58	22.05	-15.86	1.82	0.18
TX09D1172	16.7	62.7	0.45	15.1	0.491	77.44	-1.55	25.88	-14.35	1.75	-0.08
TX09D1127	15.1	61.6	0.47	13.9	0.525	79.23	-2.51	25.20	-14.57	2.26	0.33

LINE	Wheat		Flour			Noodle Color					
	Protein	Milling Yield	Ash	Protein	PPO	L @ 0	a @ 0	b @ 0	Delta L 24 hrs	Delta a 24 hrs	Delta b 24 hrs
	(%)	(%)	(%)	(%)							
N10MD2020	16.2	61.6	0.46	15.2	0.729	79.28	-2.00	23.25	-15.22	2.55	-1.19
N10MD2073	16.4	61.1	0.47	15.4	0.654	78.60	-2.06	23.85	-16.14	3.32	-4.19

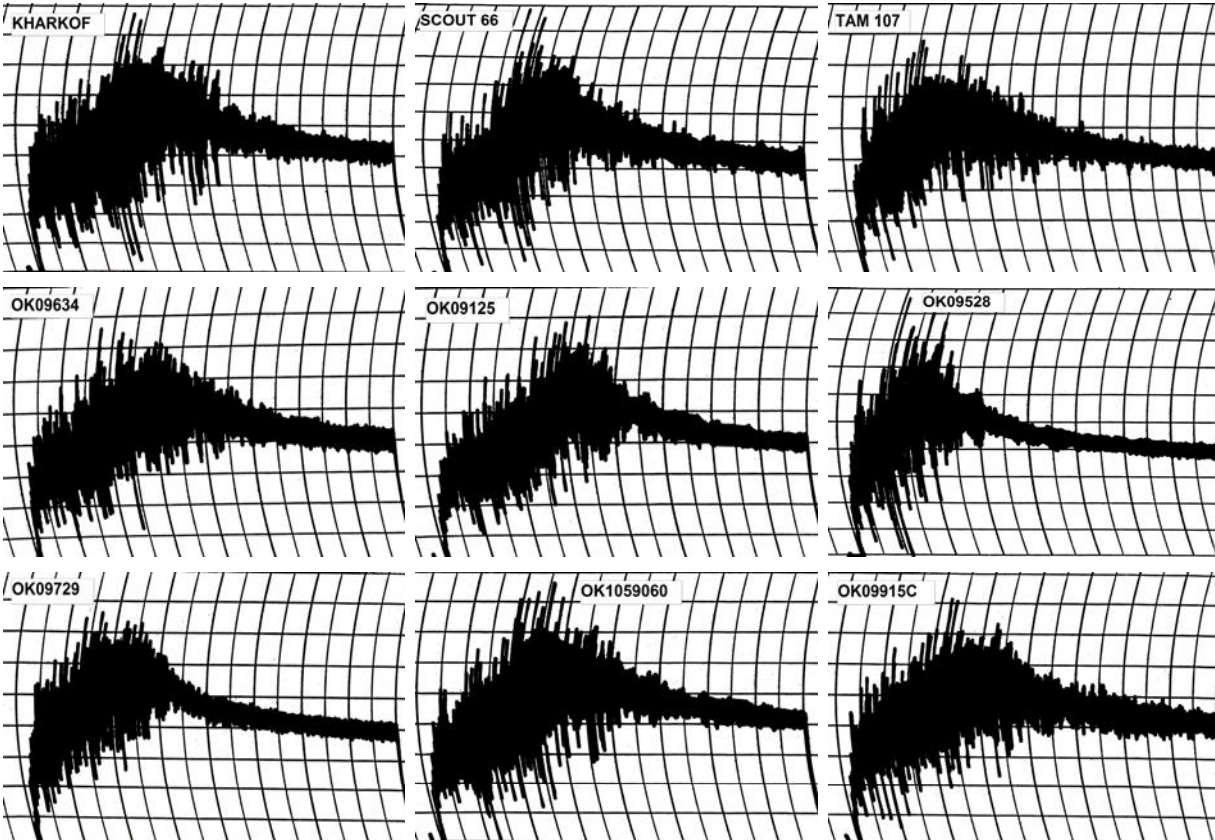
2013 SRPN Intraregional Production Zone

Northern High Plains

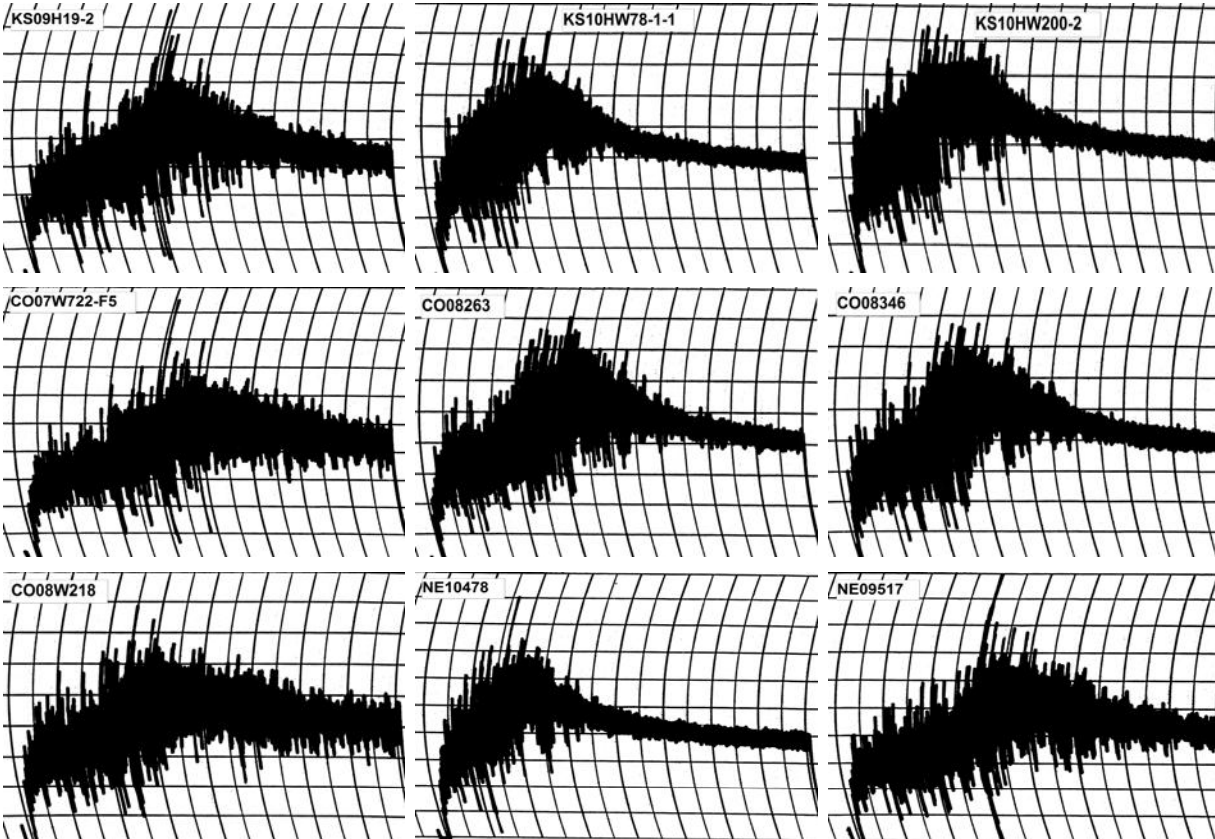
	Flour Protein	Mixograph			
		Absorption	As-Is	Corrected	Tolerance
Line	(%)	(%)	(min)	(min)	
Kharkof	15.0	64.9	2.63	2.63	0
Scout 66	14.6	65.9	2.75	2.75	0
TAM 107	14.0	64.2	2.00	2.00	0
OK09634	14.8	65.7	2.88	2.88	0
OK09125	14.1	65.4	3.13	3.13	0
OK09528	15.4	66.6	1.88	1.88	0
OK09729	15.0	62.4	2.38	2.38	0
OK1059060	15.6	66.9	2.50	2.50	0
OK09915C	15.1	66.6	2.75	2.75	0
KS09H19-2	14.4	66.0	3.50	3.50	1
KS10HW78-1-1	14.7	65.5	2.38	2.38	0
KS10HW200-2	14.3	64.8	2.38	2.38	0
CO07W722-F5	14.4	66.0	3.75	3.75	2
CO08263	14.2	63.6	3.38	3.38	0
CO08346	14.7	65.9	2.63	2.63	0
CO08W218	14.2	65.1	3.00	3.00	2
NE10478	14.4	65.5	2.13	2.13	0
NE09517	14.3	64.8	3.50	3.50	1
NE09521	15.0	65.5	3.13	3.13	1
NW09627	14.4	65.4	2.50	2.50	1
HV9W08-0285	14.4	63.4	2.13	2.13	0
HV9W08-1624	14.7	65.9	3.63	3.63	1
HV9W08-1836	14.9	65.2	3.13	3.13	0
KS030887K-6	14.4	65.4	3.13	3.13	0
KS031009K-4	14.3	65.3	2.63	2.63	0
KS050255K-7	15.6	62.5	2.00	2.00	0
K040640K-1	14.7	64.0	3.38	3.38	0
LCH08-109	14.4	64.0	2.75	2.75	1
LCH09-19	15.7	64.6	2.38	2.38	0
LCH09-43	15.0	63.9	2.00	2.00	0
LCH08-80	14.5	62.6	1.88	1.88	0
BL11002	15.2	64.2	3.00	3.00	0
TX08A001249	14.7	66.6	3.50	3.50	0
TX08V7173	15.1	65.6	2.38	2.38	0
TX08V7313	13.9	65.0	3.00	3.00	0
TX09A001194	14.6	65.8	3.38	3.38	0
TX09A001264	15.2	65.8	2.13	2.13	0
TX10A001006	15.6	66.4	2.13	2.13	0
TX10A001018	15.2	65.8	1.88	1.88	0
TX09D1172	15.1	65.5	2.13	2.13	0
TX09D1127	13.9	63.1	3.00	3.00	2
N10MD2020	15.2	64.8	3.00	3.00	0

Line	Flour Protein (%)	Mixograph			
		Absorption (%)	As-Is (min)	Corrected (min)	Tolerance
N10MD2073	15.4	64.2	2.38	2.38	0

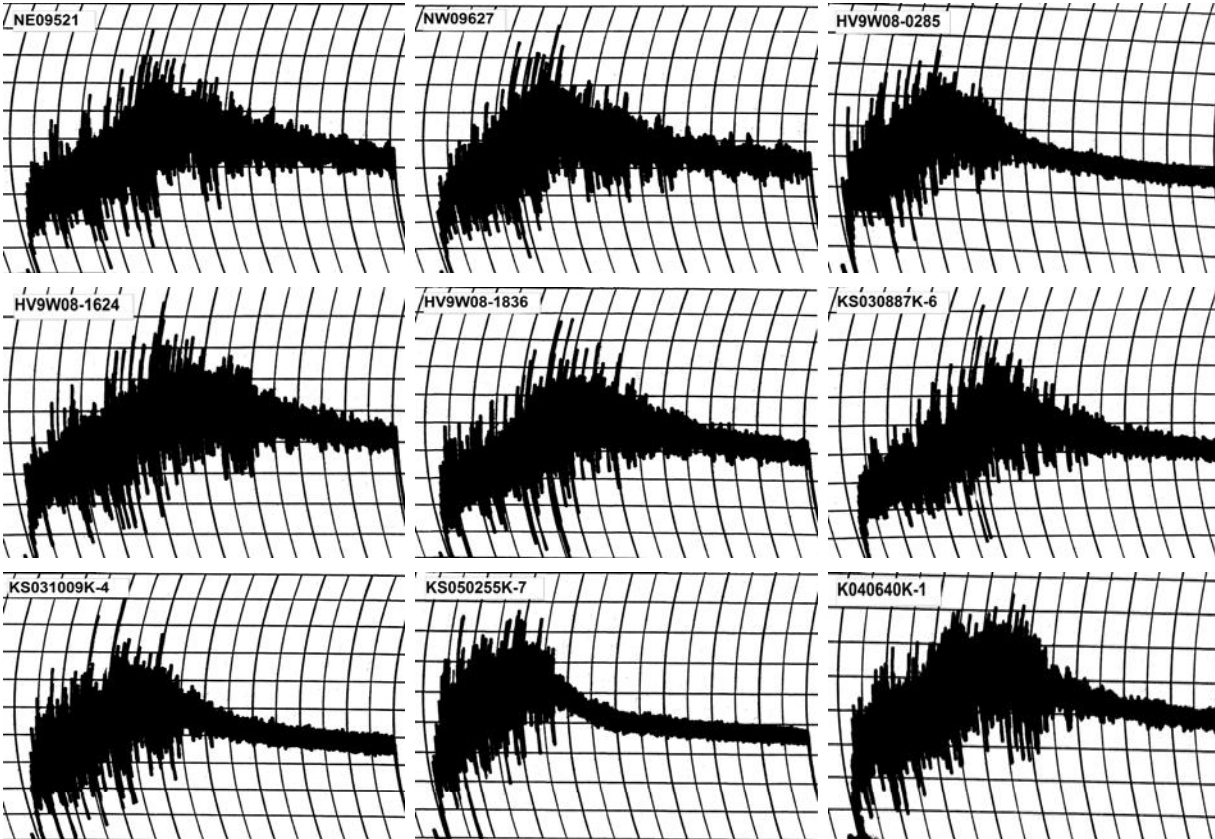
2013 SRPN Intraregional Production Zone Northern High Plains



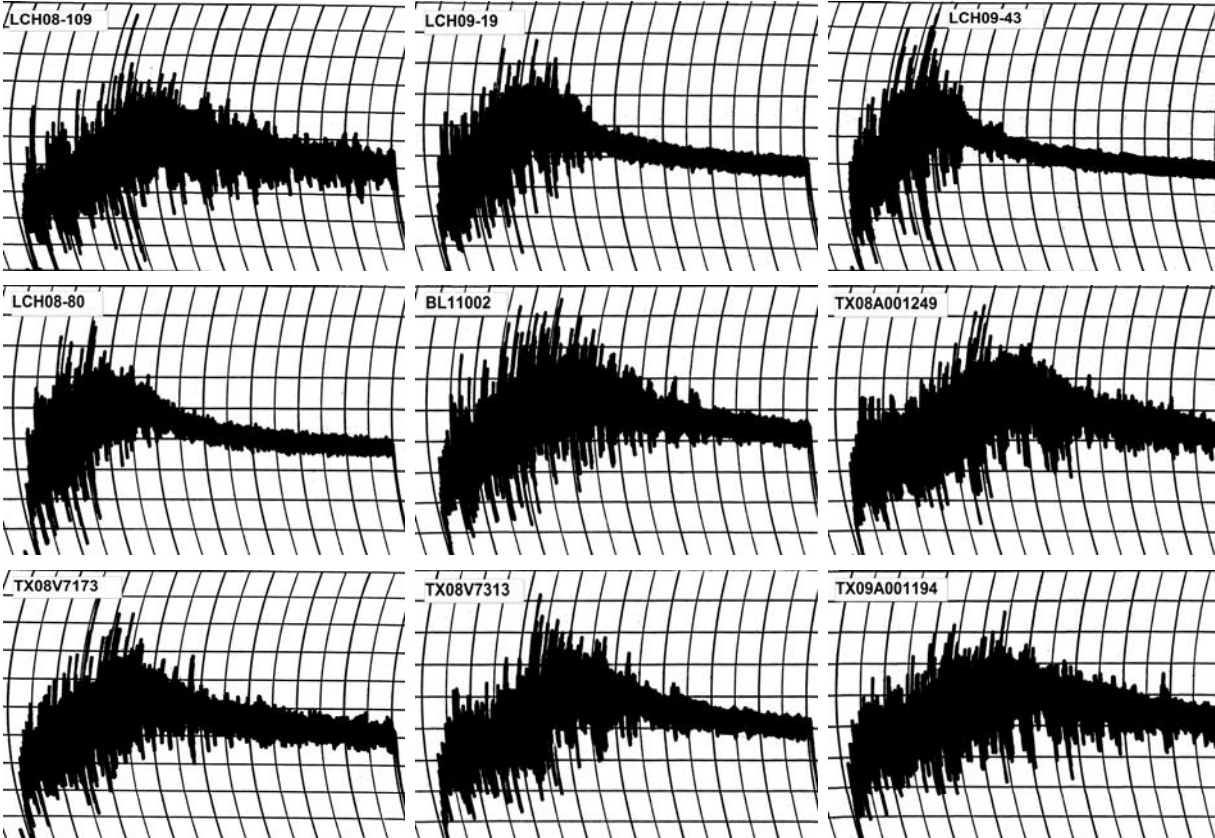
2013 SRPN Intraregional Production Zone Northern High Plains



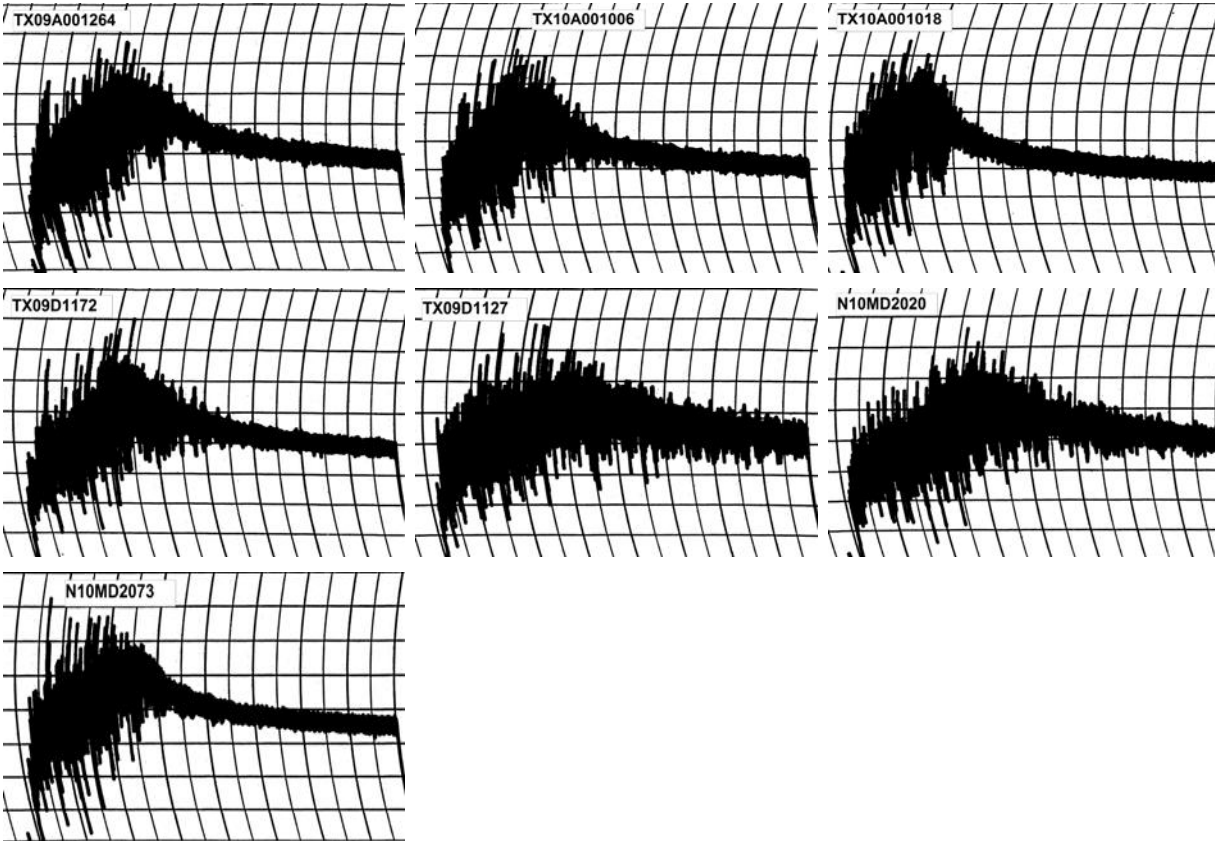
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Northern High Plains

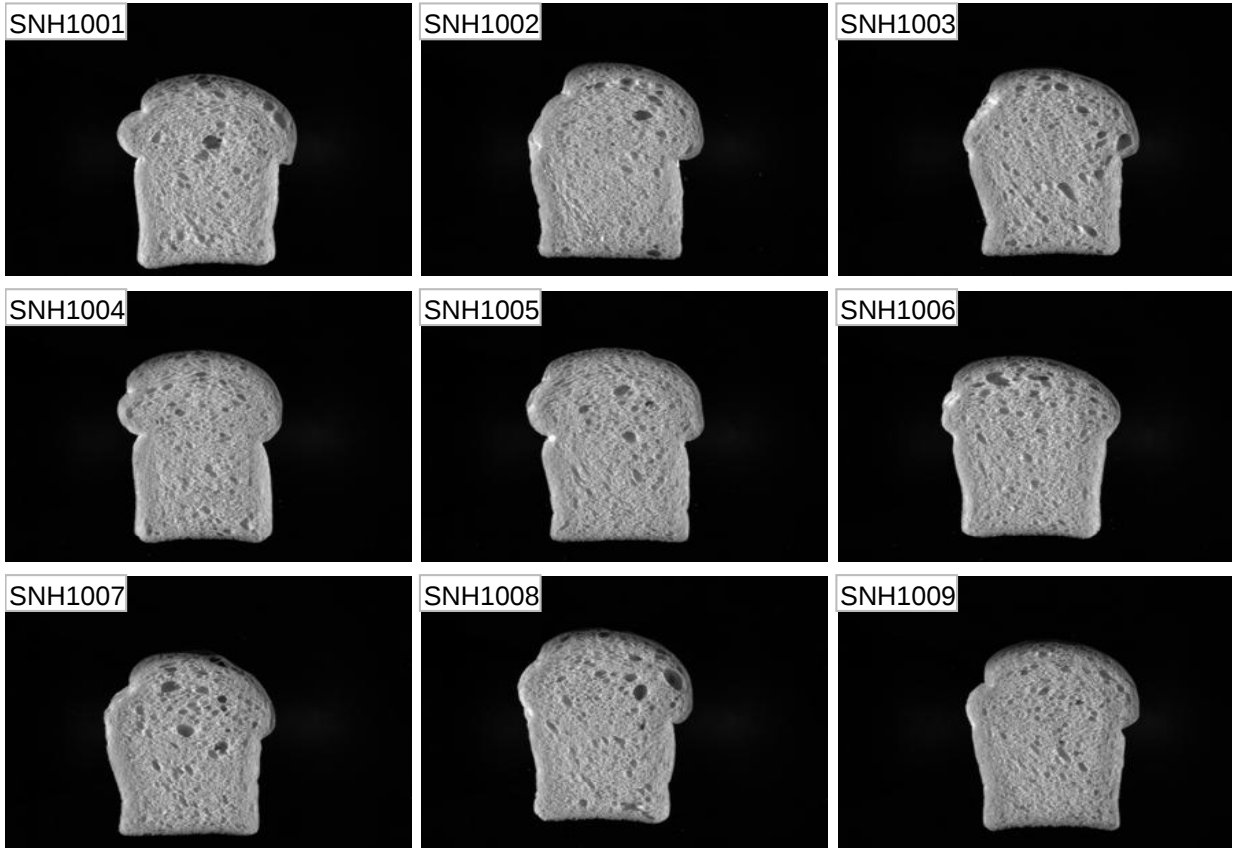
Line	RVA						
	Stirring Number (RVU)	Peak Viscosity (RVU)	Trough Viscosity (RVU)	Breakdown (RVU)	Final Viscosity (RVU)	Set back (RVU)	Peak Time (min)
Kharkof	149.25	212.83	153.08	59.75	256.92	103.83	6.40
Scout 66	137.67	204.17	147.92	56.25	255.58	107.67	6.33
TAM 107	135.75	240.58	182.25	58.33	292.75	110.50	6.60
OK09634	149.17	227.17	167.33	59.83	277.17	109.83	6.47
OK09125	132.58	229.92	172.42	57.50	291.25	118.83	6.40
OK09528	125.58	235.17	164.67	70.50	267.50	102.83	6.47
OK09729	135.75	197.00	149.58	47.42	258.67	109.08	6.40
OK1059060	146.50	213.75	156.00	57.75	265.75	109.75	6.33
OK09915C	138.33	223.58	170.42	53.17	279.33	108.92	6.47
KS09H19-2	122.17	189.17	125.67	63.50	220.58	94.92	6.13
KS10HW78-1-1	148.25	250.58	174.92	75.67	278.00	103.08	6.53
KS10HW200-2	136.75	246.92	181.42	65.50	299.33	117.92	6.47
CO07W722-F5	128.33	206.75	152.83	53.92	274.92	122.08	6.27
CO08263	134.75	252.50	174.75	77.75	279.25	104.50	6.53
CO08346	136.83	257.83	175.92	81.92	275.58	99.67	6.60
CO08W218	156.50	219.17	173.08	46.08	277.58	104.50	6.60
NE10478	149.83	194.50	152.42	42.08	260.25	107.83	6.40
NE09517	127.33	209.00	150.50	58.50	264.58	114.08	6.27
NE09521	152.58	223.42	168.75	54.67	276.42	107.67	6.53
NW09627	133.42	217.00	155.25	61.75	275.00	119.75	6.27
HV9W08-0285	142.58	221.17	160.00	61.17	274.08	114.08	6.33
HV9W08-1624	147.92	210.42	160.00	50.42	269.92	109.92	6.40
HV9W08-1836	137.75	205.67	154.42	51.25	264.92	110.50	6.40
KS030887K-6	132.50	205.00	146.17	58.83	254.08	107.92	6.33
KS031009K-4	133.75	215.17	155.42	59.75	266.00	110.58	6.33
KS050255K-7	147.33	212.67	148.50	64.17	248.67	100.17	6.40
K040640K-1	141.58	211.83	157.08	54.75	272.50	115.42	6.40
LCH08-109	116.58	215.92	150.08	65.83	257.25	107.17	6.33
LCH09-19	149.50	231.50	175.83	55.67	277.00	101.17	6.60
LCH09-43	141.33	218.92	156.92	62.00	268.33	111.42	6.40
LCH08-80	135.75	229.42	164.33	65.08	274.08	109.75	6.40
BL11002	134.00	231.08	163.42	67.67	270.42	107.00	6.40
TX08A001249	160.92	253.17	187.58	65.58	295.83	108.25	6.60
TX08V7173	135.92	248.33	176.83	71.50	281.92	105.08	6.53
TX08V7313	133.25	216.42	164.92	51.50	277.17	112.25	6.40
TX09A001194	131.33	233.58	170.83	62.75	288.67	117.83	6.40
TX09A001264	141.92	210.75	160.25	50.50	265.75	105.50	6.47
TX10A001006	140.83	204.75	163.00	41.75	278.25	115.25	6.47
TX10A001018	146.75	199.75	162.08	37.67	274.58	112.50	6.47
TX09D1172	130.33	209.33	157.00	52.33	265.92	108.92	6.40
TX09D1127	155.75	228.08	178.75	49.33	298.75	120.00	6.53
N10MD2020	152.33	228.92	171.83	57.08	271.33	99.50	6.60
N10MD2073	140.17	214.92	162.75	52.17	268.17	105.42	6.40

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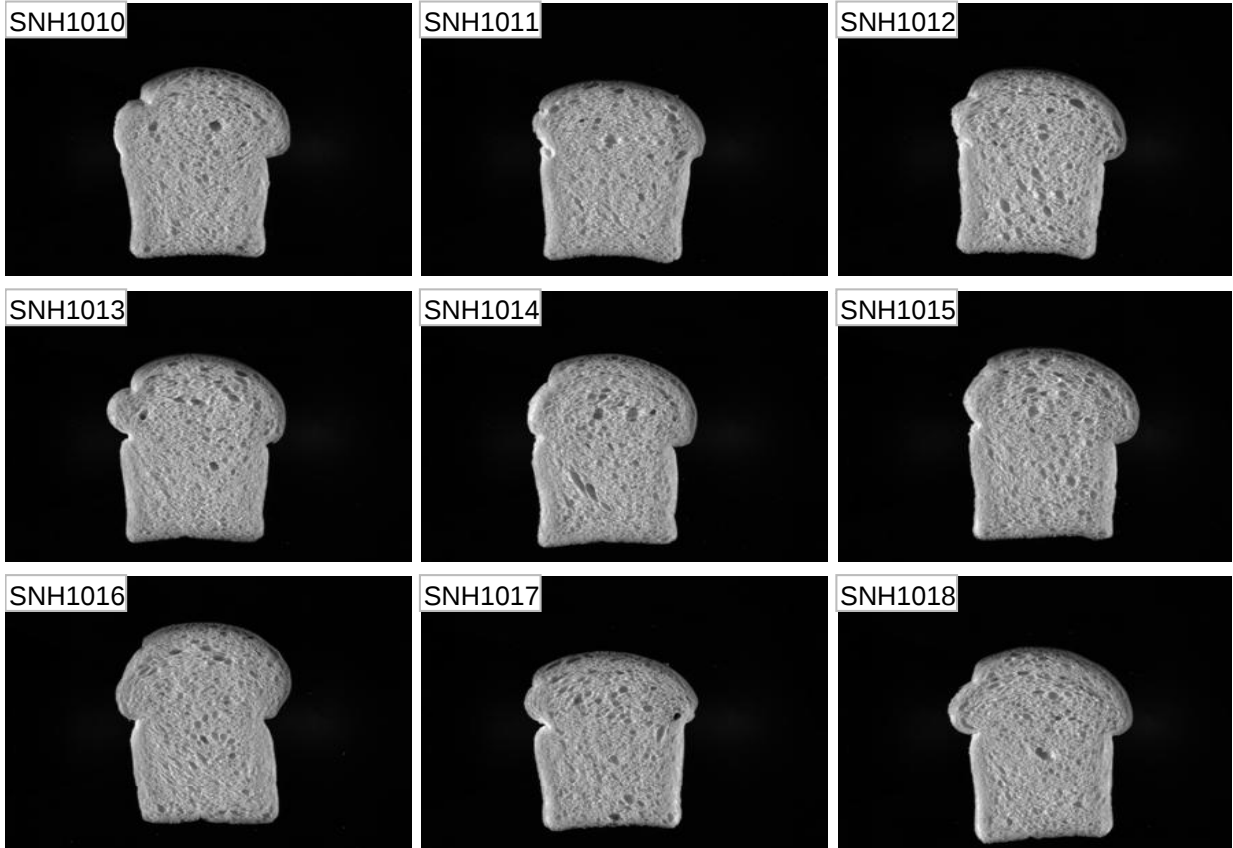
Northern High Plains

Line	Flour		Mix Time		Dough					
	Protein	Water Abs.	As-is	Corrected	Weight	Proof Height	Crumb Grain	As-Rec'd.	Specific Volume	Loaf Volume Potential
	(%)	(%)	(min)	(min)	(g)	(cm)		(cc)	(cc/g)	(cc/%)
Kharkof	15.0	65.3	4.13	4.13	174.4	7.8	2.0	870	5.7	48
Scout 66	14.6	64.2	3.38	3.38	174.0	7.6	3.0	925	6.2	54
TAM 107	14.0	64.0	3.13	3.13	173.9	7.5	1.5	860	5.7	51
OK09634	14.8	65.0	3.50	3.50	175.1	7.6	3.0	900	6.0	51
OK09125	14.1	64.2	3.75	3.75	173.9	7.8	3.0	930	6.3	57
OK09528	15.4	64.0	2.25	2.25	173.9	7.4	2.0	830	5.5	43
OK09729	15.0	62.7	2.38	2.38	172.5	7.4	1.0	825	5.5	44
OK1059060	15.6	64.7	3.50	3.50	174.1	7.9	3.0	895	6.0	47
OK09915C	15.1	66.1	3.38	3.38	175.6	7.8	2.5	900	6.0	49
KS09H19-2	14.4	66.3	4.38	4.38	175.6	7.5	3.0	885	5.9	51
KS10HW78-1-1	14.7	64.9	2.88	2.88	174.5	7.6	2.0	830	5.5	45
KS10HW200-2	14.3	64.9	2.75	2.75	175.6	7.5	1.5	880	5.8	51
CO07W722-F5	14.4	65.6	4.75	4.75	175.7	7.7	2.5	895	5.9	52
CO08263	14.2	63.7	4.00	4.00	174.2	7.8	3.5	900	5.9	54
CO08346	14.7	65.7	4.00	4.00	176.2	7.9	2.0	915	6.0	52
CO08W218	14.2	64.5	4.00	4.00	174.2	7.5	3.0	945	6.3	57
NE10478	14.4	64.4	2.50	2.50	174.6	7.4	1.5	815	5.3	45
NE09517	14.3	65.4	5.50	5.50	176.8	7.5	2.5	905	5.9	53
NE09521	15.0	64.4	4.25	4.25	174.3	7.4	2.5	950	6.4	54
NW09627	14.4	65.4	4.00	4.00	175.7	7.2	3.5	880	5.8	51
HV9W08-0285	14.4	63.6	2.75	2.75	173.8	7.4	2.0	820	5.4	46
HV9W08-1624	14.7	66.0	4.38	4.38	174.8	7.6	3.0	885	5.8	50
HV9W08-1836	14.9	64.6	4.50	4.50	174.1	7.9	3.5	960	6.4	56
KS030887K-6	14.4	64.5	4.25	4.25	173.7	7.9	4.0	1020	6.8	63
KS031009K-4	14.3	63.7	2.75	2.75	173.3	7.7	3.5	925	6.1	55
KS050255K-7	15.6	60.3	2.50	2.50	169.4	7.4	1.5	900	6.1	47
K040640K-1	14.7	64.0	3.50	3.50	172.2	7.4	2.5	945	6.2	55
LCH08-109	14.4	64.0	4.00	4.00	173.4	7.6	3.5	955	6.4	57
LCH09-19	15.7	62.9	2.38	2.38	172.6	7.7	3.5	930	6.2	49
LCH09-43	15.0	61.5	1.88	1.88	171.1	6.9	1.0	770	5.2	39
LCH08-80	14.5	62.0	1.88	1.88	171.5	7.1	1.5	860	5.8	49
BL11002	15.2	64.5	3.50	3.50	174.4	7.3	3.5	990	6.6	57
TX08A001249	14.7	66.0	4.25	4.25	178.2	7.5	3.0	1030	6.8	62
TX08V7173	15.1	64.8	3.25	3.25	173.9	7.6	2.5	1025	6.8	60
TX08V7313	13.9	63.8	4.00	4.00	174.6	7.6	4.0	995	6.7	64
TX09A001194	14.6	64.5	3.75	3.75	174.8	7.8	3.5	1050	7.0	64
TX09A001264	15.2	63.5	3.00	3.00	173.6	7.9	3.0	1010	6.7	58
TX10A001006	15.6	63.7	2.25	2.25	173.6	7.5	1.5	860	5.6	44
TX10A001018	15.2	63.5	2.13	2.13	173.4	7.6	1.0	805	5.2	41
TX09D1172	15.1	63.7	2.75	2.75	173.3	7.8	3.0	1005	6.7	58
TX09D1127	13.9	65.1	3.50	3.50	174.7	7.7	3.5	995	6.6	64
N10MD2020	15.2	64.8	4.13	4.13	174.2	7.6	4.0	980	6.5	56
N10MD2073	15.4	62.0	2.38	2.38	171.3	7.7	1.0	860	5.8	45

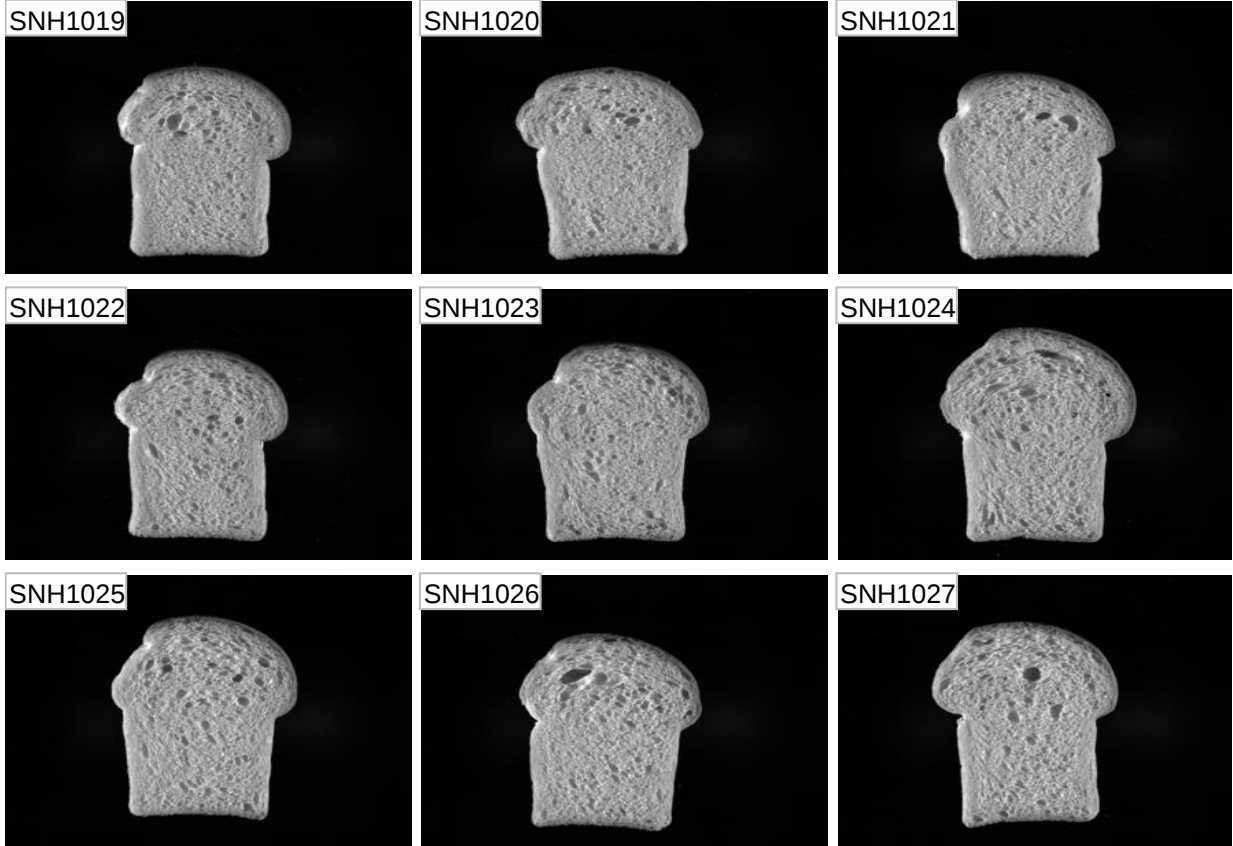
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SNH1028



SNH1029



SNH1030



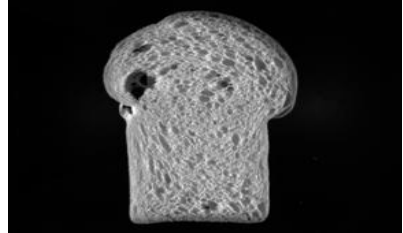
SNH1031



SNH1032



SNH1033



SNH1034



SNH1035



SNH1036



2013 SRPN Intraregional Production Zone Northern High Plains

SNH1037



SNH1038



SNH1039



SNH1040



SNH1041



SNH1042



SNH1043





Hard Winter Wheat Quality Report 2013 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
OK09729	55.4	Very Good	100.0	42.2	Poor	65.0		13,16,21,
Scout 66	55.4	Very Good	100.0	37.2	Poor	57.3		16,21,
OK09125	55.0	Very Good	99.2	55.5	Good	85.5		16,
Doublestop CL Plus	54.2	Very Good	97.9	64.9	Very Good	100.0		
HV9W08-0285	52.4	Very Good	94.7	43.0	Average	66.3		12,16,17,21,
TX08V7173	51.7	Very Good	93.4	57.2	Very Good	88.2		
OK09634	51.5	Very Good	93.0	59.1	Very Good	91.2		16,
OK09528	51.4	Very Good	92.7	40.5	Poor	62.4		5,16,21,
CO08346	51.2	Good	92.5	55.9	Good	86.2		
KS10HW78-1-1	51.2	Good	92.4	28.4	Very Poor	43.7		16,18,19,21,
OK1059060	50.6	Good	91.3	40.6	Poor	62.6		16,
BL11002	50.4	Good	90.9	51.4	Good	79.2		18,
TX10A001018	50.1	Good	90.4	31.9	Very Poor	49.1		16,19,20,21,
TX09D1172	49.6	Good	89.5	59.2	Very Good	91.2		3,16,
KS030887K-6	49.5	Good	89.3	52.2	Good	80.4		14,15,
TAM 107	49.3	Good	89.0	50.0	Good	77.1	1AL	21,
NE09517	49.1	Good	88.7	37.6	Very Poor	58.0		14,15,21,
TX08V7313	48.6	Average	87.6	43.2	Average	66.5		9,10,11,
HV9W08-1836	48.4	Average	87.4	29.8	Very Poor	45.9		14,15,
KS10HW200-2	48.3	Average	87.1	42.7	Average	65.7		
CO08W218	48.1	Average	86.9	44.1	Average	67.9		15,18,
LCS Wizard	48.1	Average	86.7	28.3	Very Poor	43.6		12,16,17,21,
NE09521	47.9	Average	86.5	47.2	Good	72.8		21,
KS031009K-4	47.7	Average	86.1	52.7	Good	81.3		11,12,17,
Oakley CL	47.4	Poor	85.6	39.4	Poor	60.7		5,14,18,21,
LCH09-19	47.4	Average	85.5	53.2	Good	82.0		16,
TX09A001264	47.3	Poor	85.4	43.7	Average	67.4		3,16,21,
NE10478	47.2	Poor	85.2	35.8	Very Poor	55.2		16,19,21,
CO07W722-F5	47.1	Poor	85.0	44.8	Average	69.0		11,15,
K040640K-1	46.2	Poor	83.3	40.9	Poor	63.0		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.



Hard Winter Wheat Quality Report 2013 SRPN-SCP

1 - Test weight
2 - SKCS kernel weight
3 - Kernel weight SD
4 - SKCS kernel diameter
5 - Kernel diameter SD
6 - SKCS hardness
7 - Hardness SD
8 - Flour yield
9 - Flour ash
10 - Milling score

10
8
8
8
8
10
8
30
10

11 - Flour protein
12 - Bake absorption
13 - Mixograph absorption
14 - Bake mix time
15 - Mixograph mix time
16 - Mixograph tolerance
17 - Dough weight
18 - Proof height
19 - Loaf volume
20 - Volume regression
21 - Crumb grain

8
15
5
10
5
5
2
20
5
25

ID	Milling		Baking				Trait	
	Score	Rating	%	Score	Rating	% 1RS	Deficiencies	
HV9W08-1624	45.7	Poor	82.5	57.5	Very Good	88.6	18,	
LCH09-43	45.7	Poor	82.5	30.9	Very Poor	47.7	1,9,12,16,17,19,20,21,	
TX10A001006	45.4	Poor	81.9	38.9	Poor	59.9	16,20,21,	
TX08A001249	45.2	Poor	81.6	63.4	Very Good	97.7 1AL		
CO08263	44.5	Very Poor	80.4	45.3	Good	69.8	2,	
TX09A001194	44.4	Very Poor	80.1	56.7	Very Good	87.4		
LCH08-109	44.1	Very Poor	79.5	38.0	Very Poor	58.6	1,	
TX09D1127	43.7	Very Poor	78.9	43.6	Average	67.2	3,9,	
N10MD2073	42.5	Very Poor	76.7	41.9	Poor	64.5	2,4,16,21,	
NW09627	42.3	Very Poor	76.4	45.4	Average	70.0	1,	
N10MD2020	42.0	Very Poor	75.9	39.3	Poor	60.5		
Kharkof	41.2	Very Poor	74.4	61.3	Very Good	94.5	2,4,10,16,	
KS050255K-7	27.3	Very Poor	49.4	36.1	Very Poor	55.6	6,8,10,12,13,16,17,21,	

2013 SRPN Intraregional Production Zone

South Central Plains

LINE	Wt/Bu (lb)	SKCS Average Kernel						Hardness			
		Moisture		Weight		Diameter		SKCS	Class	Distribution	
		(%)	(sd)	(mg)	(sd)	(mm)	(sd)				
								(sd)			
Kharkof	59.6	11.7	0.4	22.9	6.3	2.35	0.26	53 21	MIXED	16--24--22--38--03	
Scout 66	60.1	11.6	0.4	27.0	7.5	2.57	0.31	74 21	HARD	03--06--13--78--01	
TAM 107	58.2	11.5	0.4	28.2	7.8	2.56	0.34	72 18	HARD	03--05--17--75--01	
OK09634	58.8	11.4	0.4	25.2	7.1	2.50	0.32	72 20	HARD	04--05--15--76--01	
OK09125	58.8	11.9	0.4	29.1	7.8	2.64	0.31	66 19	HARD	05--12--21--62--01	
OK09528	59.8	11.6	0.4	28.3	8.2	2.62	0.35	74 18	HARD	01--04--18--77--01	
OK09729	58.7	11.7	0.4	27.6	7.6	2.61	0.30	72 19	HARD	01--05--21--73--01	
OK1059060	59.4	12.0	0.4	26.3	6.8	2.50	0.26	70 20	HARD	04--08--17--71--01	
OK09915C	61.5	11.6	0.4	29.9	7.6	2.71	0.31	81 17	HARD	01--02--08--89--01	
KS09H19-2	59.5	11.6	0.4	27.6	8.5	2.59	0.35	80 20	HARD	02--05--09--84--01	
KS10HW78-1-1	59.6	11.8	0.4	27.3	7.3	2.58	0.31	74 20	HARD	03--08--12--77--01	
KS10HW200-2	60.9	11.7	0.4	26.5	7.8	2.53	0.31	75 21	HARD	02--08--13--77--01	
CO07W722-F5	57.8	11.7	0.4	25.0	7.5	2.46	0.30	83 19	HARD	01--02--08--89--01	
CO08263	57.7	11.6	0.4	22.7	6.5	2.42	0.28	69 21	HARD	06--08--16--70--02	
CO08346	60.2	11.8	0.4	24.2	6.0	2.46	0.28	70 18	HARD	03--06--17--74--01	
CO08W218	60.3	11.8	0.4	27.0	7.7	2.49	0.31	73 22	HARD	04--06--15--75--01	
NE10478	58.0	11.9	0.4	23.5	6.8	2.40	0.29	76 20	HARD	03--07--10--80--01	
NE09517	60.5	11.6	0.4	26.8	7.8	2.55	0.30	70 20	HARD	03--12--16--69--01	
NE09521	58.1	11.4	0.4	24.7	6.9	2.48	0.29	73 20	HARD	03--07--13--77--01	
NW09627	56.5	11.5	0.4	24.7	7.6	2.47	0.31	61 21	HARD	10--16--18--56--02	
HV9W08-0285	59.1	11.4	0.4	24.1	6.4	2.41	0.29	70 18	HARD	02--09--19--70--01	
HV9W08-1624	59.4	11.4	0.3	26.0	7.0	2.57	0.32	76 20	HARD	02--05--12--81--01	
HV9W08-1836	57.8	11.1	0.4	24.2	6.8	2.48	0.29	68 21	HARD	04--09--21--66--01	
KS030887K-6	61.1	11.2	0.4	24.1	6.6	2.50	0.29	78 21	HARD	03--04--11--82--01	
KS031009K-4	58.1	11.5	0.5	26.9	7.8	2.49	0.32	65 22	HARD	07--15--22--56--02	
KS050255K-7	58.4	11.3	0.4	27.0	8.0	2.47	0.32	34 21	MIXED	51--23--11--15--03	
K040640K-1	58.4	11.4	0.4	28.3	8.0	2.64	0.32	75 19	HARD	01--06--14--79--01	
LCH08-109	56.2	11.4	0.4	24.2	6.4	2.43	0.27	58 22	MIXED	14--15--23--48--03	
LCH09-19	58.0	11.7	0.4	26.7	7.3	2.42	0.33	66 20	HARD	04--13--18--65--01	
LCH09-43	55.3	11.5	0.4	29.2	7.6	2.66	0.33	65 19	HARD	05--09--22--64--01	
LCH08-80	59.0	11.6	0.4	26.5	7.3	2.56	0.30	72 21	HARD	03--08--18--71--01	
BL11002	59.4	11.9	0.4	29.5	7.9	2.66	0.31	71 19	HARD	03--10--13--74--01	
TX08A001249	60.0	11.4	0.5	26.2	7.9	2.52	0.34	69 19	HARD	01--10--18--71--01	
TX08V7173	60.3	11.3	0.5	24.2	7.8	2.43	0.30	71 19	HARD	02--07--17--74--01	
TX08V7313	61.1	11.9	0.4	27.5	7.9	2.63	0.32	80 22	HARD	02--06--10--82--01	
TX09A001194	59.7	11.8	0.4	30.0	8.3	2.60	0.34	64 23	HARD	09--14--20--57--02	
TX09A001264	60.9	11.4	0.4	28.3	8.7	2.62	0.33	67 23	HARD	06--09--22--63--02	
TX10A001006	58.3	11.5	0.8	26.6	7.7	2.61	0.32	75 19	HARD	02--03--16--79--01	
TX10A001018	59.5	11.7	0.7	27.4	7.9	2.65	0.31	74 19	HARD	02--06--13--79--01	
TX09D1172	60.0	11.6	0.8	28.8	8.9	2.61	0.34	76 18	HARD	01--05--12--82--01	
TX09D1127	59.3	11.4	0.7	31.0	9.0	2.69	0.32	73 19	HARD	01--05--16--78--01	
N10MD2020	58.4	11.0	0.8	24.9	8.0	2.48	0.31	63 22	HARD	08--13--23--56--02	
N10MD2073	57.1	10.9	0.9	21.9	7.2	2.38	0.27	66 21	HARD	05--13--20--62--01	

2013 SRPN Intraregional Production Zone

South Central Plains

LINE	Wheat		Flour			Noodle Color					
	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	15.3	64.9	0.48	13.7	0.580	79.83	-2.16	24.18	-11.17	1.56	0.68
Scout 66	14.1	70.6	0.47	13.0	0.543	79.09	-1.98	24.47	-11.15	1.52	-0.18
TAM 107	14.0	66.8	0.45	12.8	0.542	79.31	-1.79	24.24	-14.26	1.61	1.25
OK09634	13.8	69.4	0.49	13.2	0.185	79.50	-2.09	24.46	-9.79	1.30	1.69
OK09125	13.5	70.2	0.43	12.6	0.496	79.74	-2.08	24.21	-12.31	1.44	1.71
OK09528	13.9	67.2	0.45	13.5	0.558	79.77	-1.89	24.51	-13.10	1.75	1.95
OK09729	14.2	69.4	0.41	13.1	0.559	79.30	-1.76	23.77	-12.72	1.50	1.73
OK1059060	14.3	67.7	0.49	13.4	0.610	80.19	-1.96	23.62	-14.54	1.48	1.64
OK09915C	15.0	65.5	0.45	13.6	0.560	79.63	-1.59	22.88	-14.23	1.56	1.98
KS09H19-2	13.8	66.4	0.49	12.5	0.176	80.02	-1.70	23.68	-8.45	0.94	3.38
KS10HW78-1-1	13.6	67.8	0.48	12.2	0.568	79.82	-1.85	23.11	-12.45	1.64	1.26
KS10HW200-2	13.7	65.7	0.44	12.1	0.508	81.29	-2.73	25.51	-10.46	1.20	0.98
CO07W722-F5	13.2	65.6	0.46	11.8	0.213	82.94	-1.92	21.11	-11.37	0.70	6.38
CO08263	13.4	66.4	0.46	12.0	0.580	80.08	-2.01	23.73	-11.93	1.24	2.83
CO08346	13.8	66.3	0.43	12.6	0.664	79.28	-2.03	24.60	-11.05	1.32	1.13
CO08W218	13.4	66.5	0.46	12.2	0.645	81.00	-2.14	23.48	-11.34	1.31	2.54
NE10478	13.6	67.6	0.51	12.4	0.640	79.82	-1.84	23.85	-11.18	1.02	1.51
NE09517	13.5	67.5	0.50	12.3	0.679	81.19	-2.20	22.33	-12.36	1.45	3.24
NE09521	13.8	67.2	0.49	12.9	0.292	79.35	-1.81	24.56	-8.72	0.83	2.01
NW09627	13.2	67.3	0.48	12.7	0.314	81.63	-2.41	24.94	-10.05	0.86	3.26
HV9W08-0285	13.5	68.2	0.42	12.4	0.546	79.75	-2.23	25.40	-9.79	1.30	1.61
HV9W08-1624	13.9	65.0	0.50	12.7	0.721	81.16	-1.38	20.38	-13.16	1.26	4.15
HV9W08-1836	13.9	68.1	0.45	12.9	0.633	79.59	-1.51	24.24	-13.22	1.13	1.63
KS030887K-6	13.4	66.7	0.51	12.1	0.604	80.20	-2.26	24.43	-12.17	1.67	0.86
KS031009K-4	12.6	68.6	0.44	11.6	0.506	81.04	-2.32	23.95	-10.30	1.14	2.42
KS050255K-7	15.1	54.9	0.44	13.6	0.320	79.60	-1.62	23.15	-10.81	1.24	-0.25
K040640K-1	14.3	65.3	0.49	13.4	0.337	80.20	-1.68	23.24	-13.02	1.44	3.47
LCH08-109	13.2	68.1	0.48	12.5	0.569	79.56	-1.92	25.17	-11.05	1.14	1.02
LCH09-19	14.4	68.0	0.49	13.7	0.663	80.15	-1.52	20.44	-15.85	1.46	2.16
LCH09-43	13.7	67.5	0.52	12.7	0.663	79.03	-1.84	23.97	-15.57	1.92	1.26
LCH08-80	14.0	66.9	0.48	12.5	0.543	79.38	-1.69	24.34	-10.38	1.02	0.58
BL11002	13.2	66.6	0.46	12.4	0.228	81.34	-1.96	23.08	-9.49	0.79	3.43
TX08A001249	13.6	64.8	0.46	12.8	0.509	80.07	-1.74	22.76	-13.42	1.70	2.05
TX08V7173	14.3	68.5	0.44	12.8	0.511	79.53	-1.52	22.39	-11.71	1.45	2.67
TX08V7313	13.4	67.3	0.55	11.8	0.691	79.72	-1.92	23.50	-13.04	1.52	4.01
TX09A001194	13.3	66.4	0.50	12.6	0.592	81.57	-1.61	19.92	-16.04	1.69	5.04
TX09A001264	13.6	67.4	0.47	12.3	0.542	79.82	-1.86	22.80	-11.77	1.33	1.70
TX10A001006	14.9	64.3	0.44	14.2	0.564	79.39	-1.91	24.20	-13.42	1.90	0.73
TX10A001018	14.1	66.1	0.44	13.1	0.550	79.69	-1.69	22.70	-12.96	1.26	2.29
TX09D1172	14.2	66.8	0.49	13.0	0.548	80.02	-1.75	22.87	-13.92	1.63	4.11
TX09D1127	13.2	64.0	0.52	12.0	0.578	80.91	-2.02	22.89	-13.64	1.32	3.83

LINE	Wheat		Flour			Noodle Color					
	Protein	Milling Yield	Ash	Protein	PPO	L @ 0	a @ 0	b @ 0	Delta L 24 hrs	Delta a 24 hrs	Delta b 24 hrs
	(%)	(%)	(%)	(%)							
N10MD2020	14.2	65.9	0.45	13.2	0.709	81.28	-1.88	21.55	-13.71	1.35	3.11
N10MD2073	14.8	66.5	0.48	13.9	0.665	79.60	-1.89	24.01	-14.92	1.55	1.29

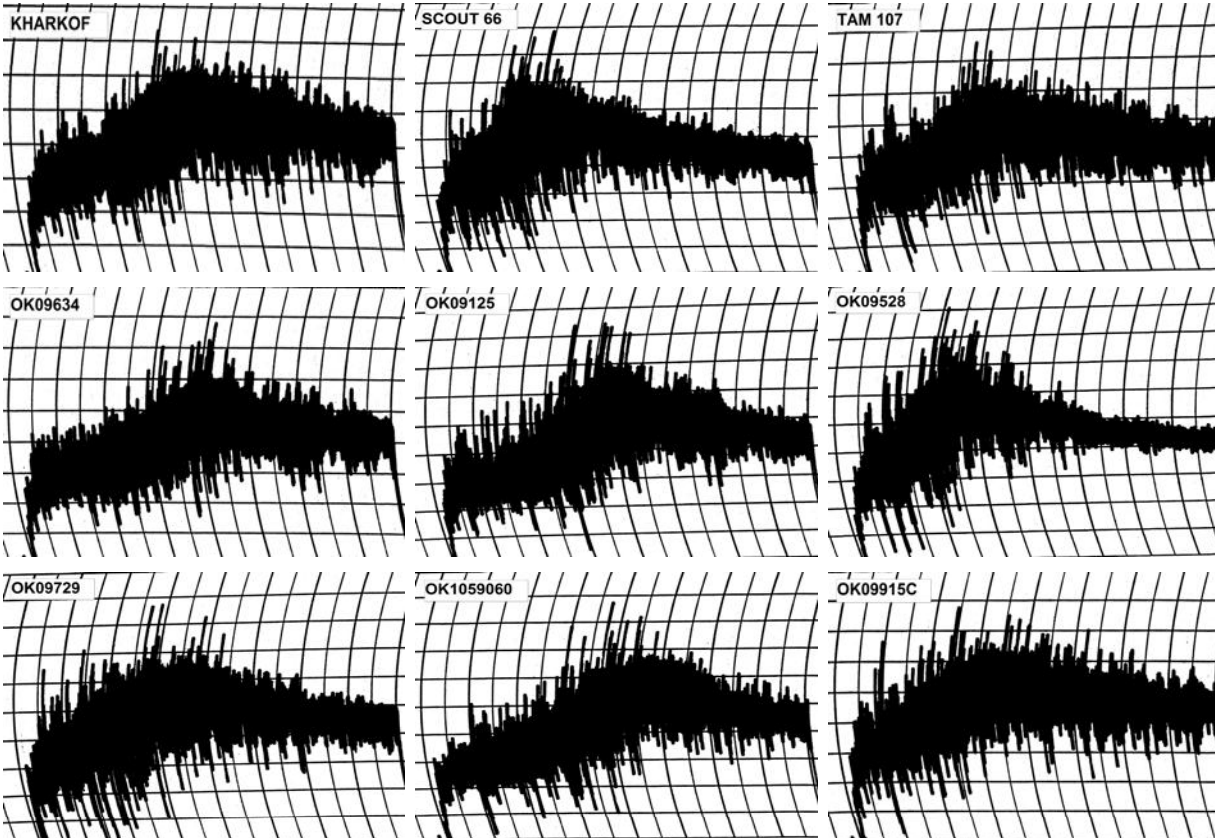
2013 SRPN Intraregional Production Zone

South Central Plains

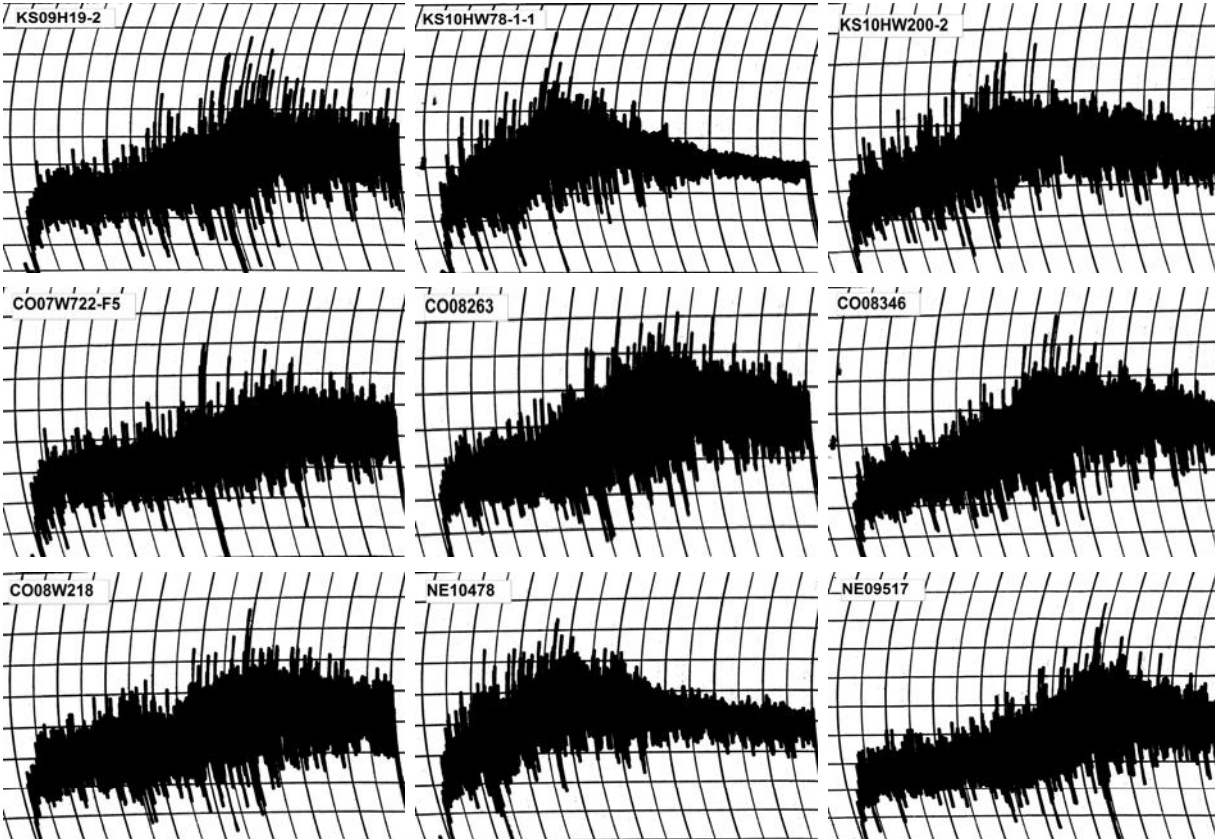
Line	Flour Protein (%)	Mixograph			
		Absorption (%)	As-Is (min)	Corrected (min)	Tolerance
Kharkof	13.7	63.2	3.88	3.88	2
Scout 66	13.0	63.6	2.38	2.38	2
TAM 107	12.8	64.2	3.25	3.25	3
OK09634	13.2	64.0	4.13	4.13	2
OK09125	12.6	63.9	3.88	3.88	2
OK09528	13.5	65.4	2.50	2.50	0
OK09729	13.1	60.8	3.50	3.50	2
OK1059060	13.4	64.7	4.63	4.63	2
OK09915C	13.6	65.6	3.38	3.38	4
KS09H19-2	12.5	63.8	5.00	5.00	5
KS10HW78-1-1	12.2	62.2	3.00	3.00	0
KS10HW200-2	12.1	63.1	3.75	3.75	4
CO07W722-F5	11.8	62.5	5.50	5.35	5
CO08263	12.0	62.0	5.00	5.00	5
CO08346	12.6	63.9	4.50	4.50	5
CO08W218	12.2	62.4	5.50	5.50	5
NE10478	12.4	63.6	3.00	3.00	1
NE09517	12.3	63.0	5.50	5.50	5
NE09521	12.9	64.0	4.13	4.13	4
NW09627	12.7	64.1	3.88	3.88	3
HV9W08-0285	12.4	62.6	3.88	3.88	1
HV9W08-1624	12.7	64.2	4.25	4.25	5
HV9W08-1836	12.9	63.5	6.25	6.25	5
KS030887K-6	12.1	62.1	5.38	5.38	4
KS031009K-4	11.6	61.8	4.00	3.82	3
KS050255K-7	13.6	59.6	3.00	3.00	0
K040640K-1	13.4	62.8	4.38	4.38	2
LCH08-109	12.5	62.8	4.13	4.13	4
LCH09-19	13.7	63.8	3.50	3.50	1
LCH09-43	12.7	62.1	2.50	2.50	0
LCH08-80	12.5	61.4	2.50	2.50	1
BL11002	12.4	63.0	4.00	4.00	4
TX08A001249	12.8	64.2	5.00	5.00	5
TX08V7173	12.8	63.8	4.13	4.13	4
TX08V7313	11.8	62.6	4.00	3.91	4
TX09A001194	12.6	64.0	4.75	4.75	5
TX09A001264	12.3	63.4	3.75	3.75	2
TX10A001006	14.2	64.7	2.50	2.50	1
TX10A001018	13.1	64.2	2.25	2.25	1
TX09D1172	13.0	63.2	3.25	3.25	2
TX09D1127	12.0	61.5	3.88	3.88	4
N10MD2020	13.2	62.9	4.63	4.63	4

Line	Flour Protein (%)	Mixograph			
		Absorption (%)	As-Is (min)	Corrected (min)	Tolerance
N10MD2073	13.9	62.1	3.38	3.38	2

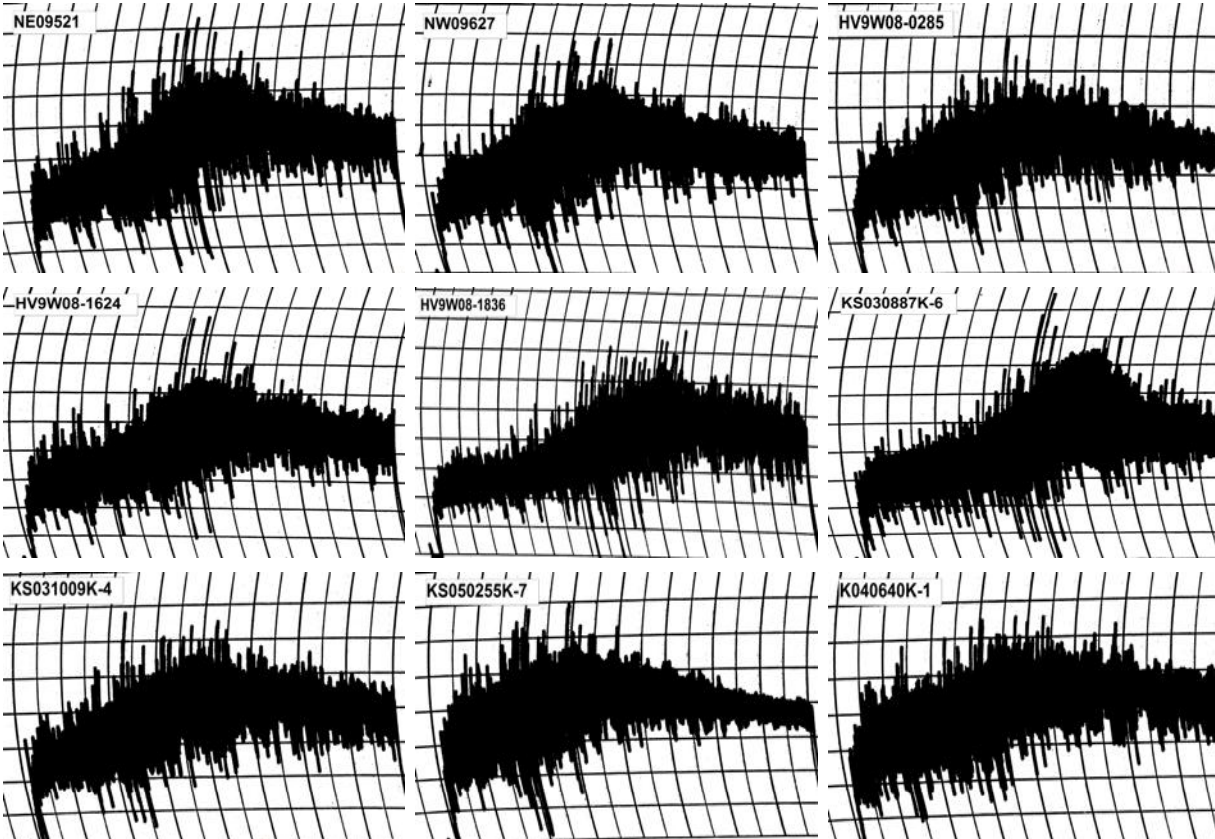
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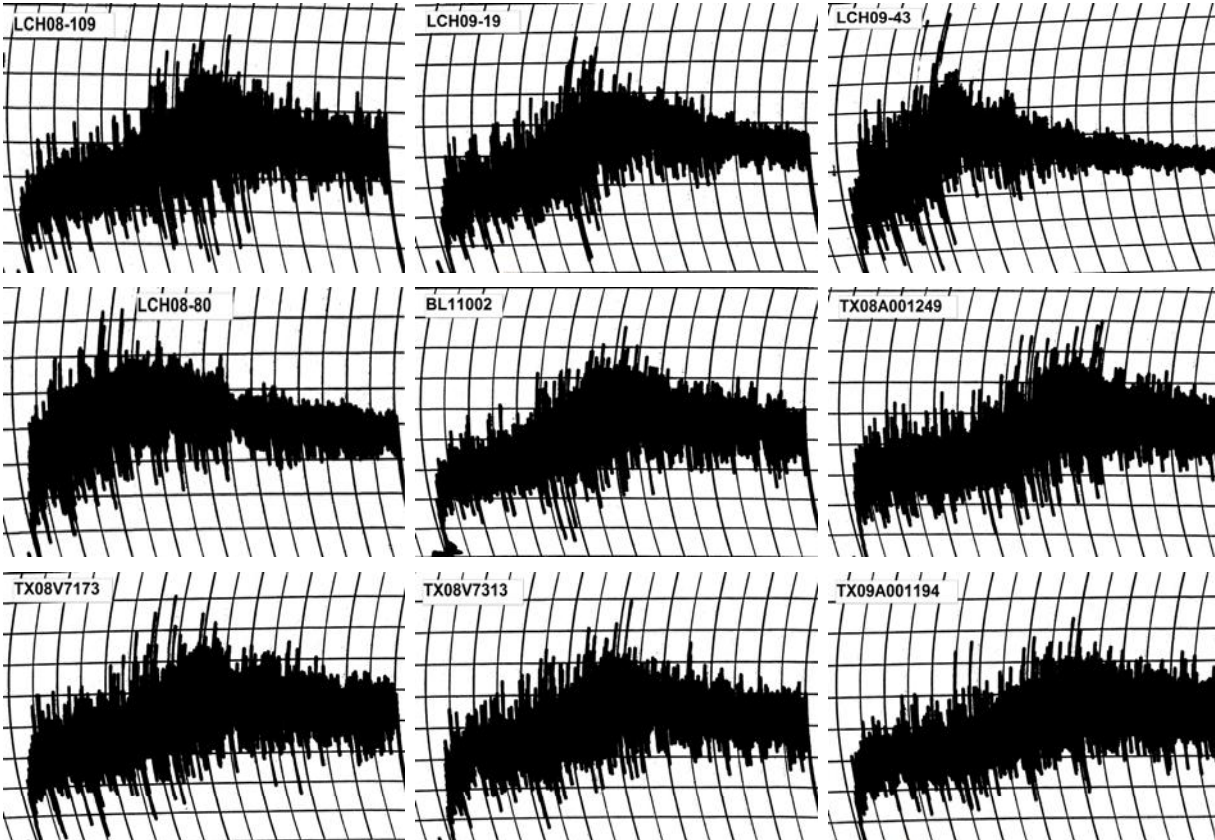
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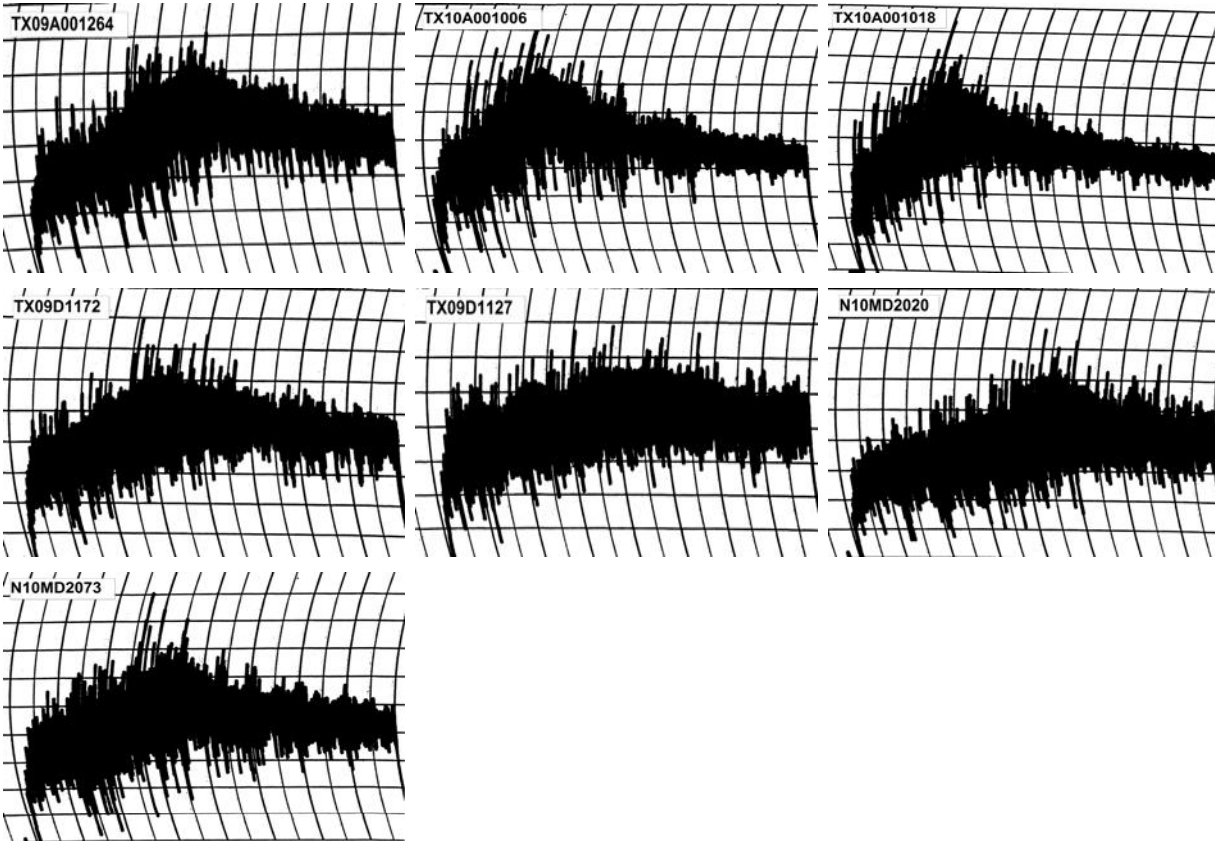
2013 SRPN Intraregional Production Zone South Central Plains



2013 SRPN Intraregional Production Zone South Central Plains



2013 SRPN Intraregional Production Zone South Central Plains



2013 SRPN Intraregional Production Zone

Southern Central Plains

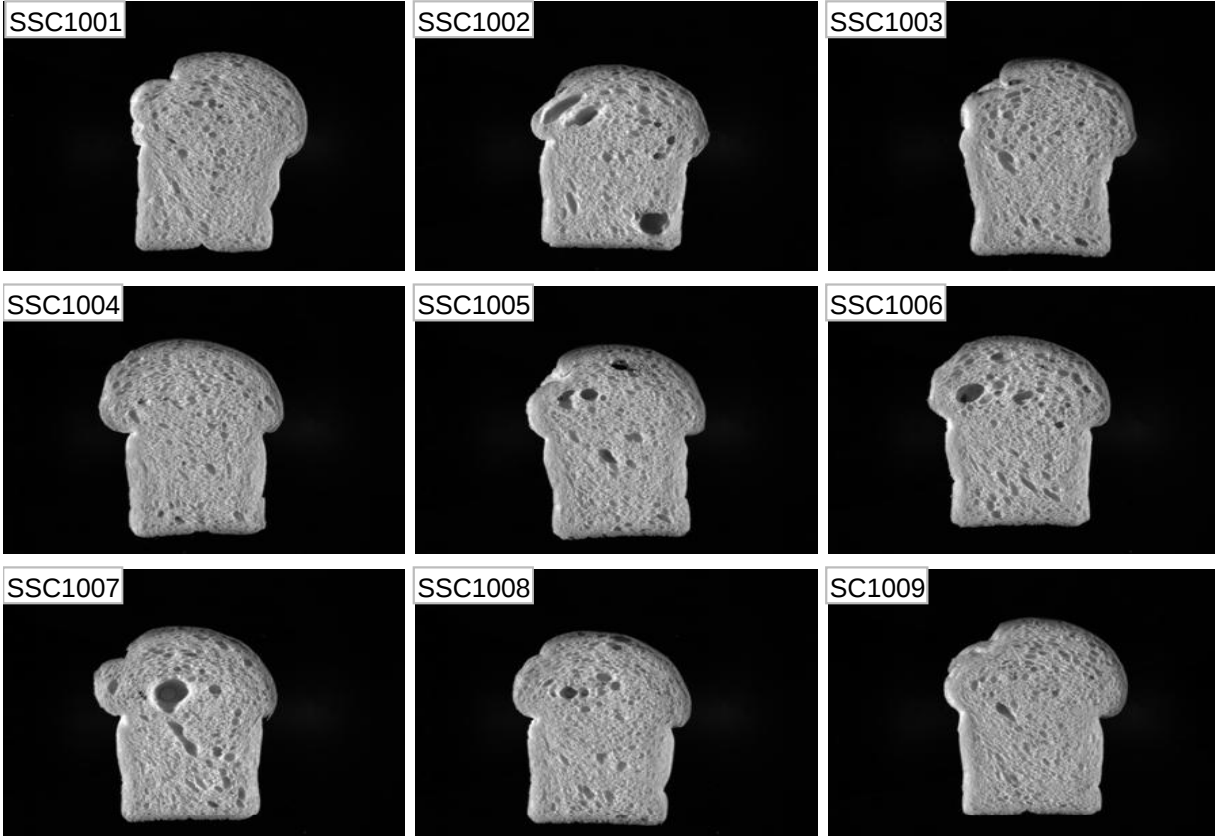
Line	RVA						
	Stirring Number (RVU)	Peak Viscosity (RVU)	Trough Viscosity (RVU)	Breakdown (RVU)	Final Viscosity (RVU)	Set back (RVU)	Peak Time (min)
Kharkof	150.67	231.75	170.25	61.50	281.42	111.17	6.47
Scout 66	125.00	231.42	159.75	71.67	275.92	116.17	6.27
TAM 107	137.17	277.75	179.33	98.42	294.50	115.17	6.40
OK09634	100.67	239.33	147.83	91.50	254.17	106.33	6.20
OK09125	118.75	254.42	165.42	89.00	282.83	117.42	6.20
OK09528	92.33	255.00	149.33	105.67	253.58	104.25	6.20
OK09729	117.92	219.75	147.67	72.08	260.08	112.42	6.27
OK1059060	125.75	239.75	153.92	85.83	269.00	115.08	6.13
OK09915C	131.08	241.08	167.50	73.58	281.00	113.50	6.33
KS09H19-2	130.75	248.75	164.50	84.25	282.08	117.58	6.20
KS10HW78-1-1	112.58	284.25	169.42	114.83	279.00	109.58	6.27
KS10HW200-2	127.42	277.75	176.92	100.83	297.17	120.25	6.33
CO07W722-F5	131.58	226.75	156.83	69.92	281.58	124.75	6.20
CO08263	117.42	262.08	158.00	104.08	268.67	110.67	6.27
CO08346	119.92	274.17	174.50	99.67	278.75	104.25	6.47
CO08W218	143.58	242.83	166.08	76.75	280.67	114.58	6.33
NE10478	127.75	210.17	151.33	58.83	269.67	118.33	6.27
NE09517	119.75	232.67	152.50	80.17	274.00	121.50	6.13
NE09521	123.83	231.00	157.92	73.08	274.00	116.08	6.33
NW09627	119.25	234.75	148.67	86.08	267.67	119.00	6.13
HV9W08-0285	113.42	246.67	159.92	86.75	274.67	114.75	6.20
HV9W08-1624	113.75	239.17	162.75	76.42	281.83	119.08	6.27
HV9W08-1836	104.00	234.50	159.17	75.33	283.08	123.92	6.20
KS030887K-6	110.83	239.67	155.92	83.75	271.50	115.58	6.20
KS031009K-4	123.83	249.25	162.17	87.08	281.00	118.83	6.20
KS050255K-7	127.83	243.58	157.67	85.92	266.75	109.08	6.33
K040640K-1	135.67	238.25	160.25	78.00	281.67	121.42	6.27
LCH08-109	113.00	223.08	141.17	81.92	246.75	105.58	6.20
LCH09-19	122.42	252.25	166.33	85.92	274.67	108.33	6.40
LCH09-43	104.42	223.08	134.08	89.00	244.75	110.67	6.00
LCH08-80	117.83	250.25	154.75	95.50	267.50	112.75	6.20
BL11002	116.33	252.92	154.75	98.17	265.50	110.75	6.20
TX08A001249	112.67	277.42	176.83	100.58	284.58	107.75	6.40
TX08V7173	101.25	286.00	181.25	104.75	290.75	109.50	6.40
TX08V7313	97.75	236.08	161.83	74.25	271.67	109.83	6.33
TX09A001194	116.17	260.83	166.75	94.08	283.92	117.17	6.27
TX09A001264	100.33	244.67	159.75	84.92	271.75	112.00	6.27
TX10A001006	110.42	243.17	170.33	72.83	298.58	128.25	6.27
TX10A001018	123.25	224.83	166.58	58.25	292.00	125.42	6.33
TX09D1172	98.08	229.92	147.08	82.83	256.75	109.67	6.20
TX09D1127	134.08	254.67	180.25	74.42	307.75	127.50	6.40
N10MD2020	143.92	260.83	174.33	86.50	281.75	107.42	6.47
N10MD2073	136.83	249.00	172.25	76.75	288.75	116.50	6.33

2013 SRPN Intraregional Production Zone

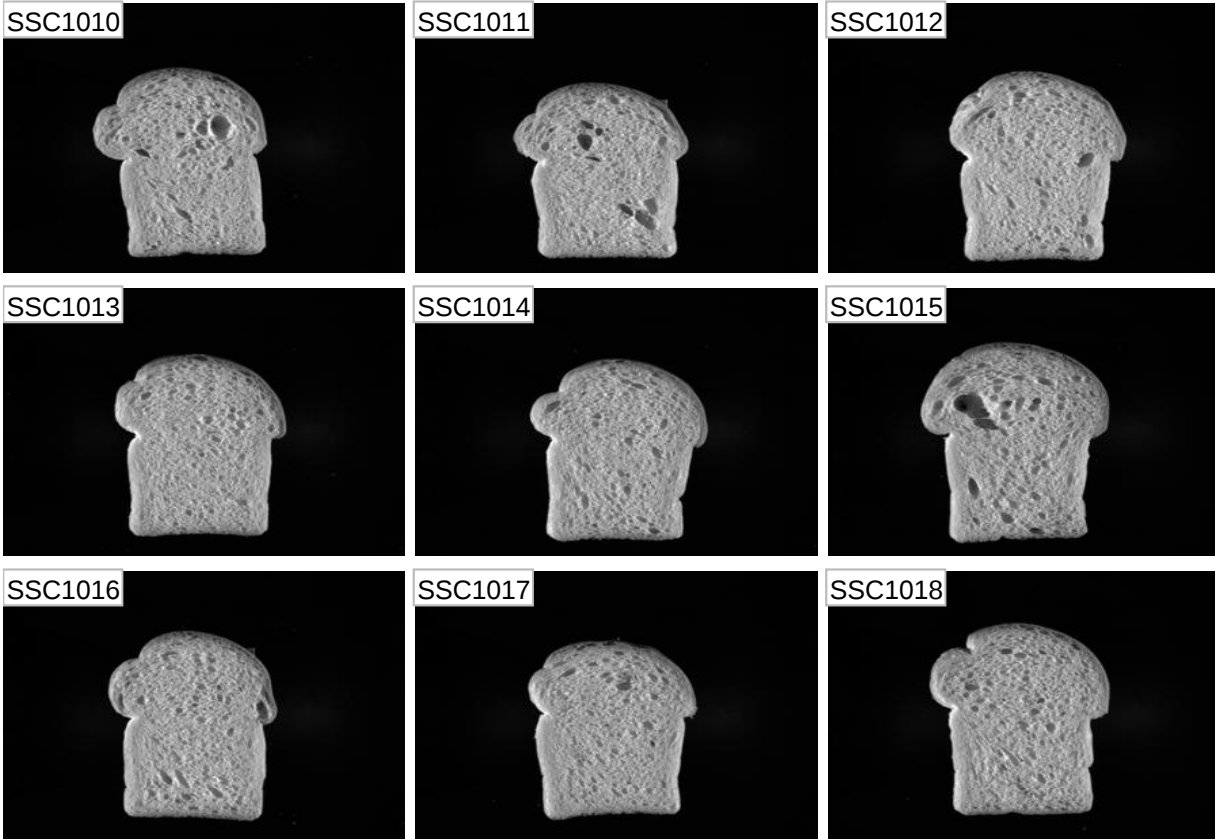
South Central Plains

Line	Flour		Mix Time		Dough					
	Protein	Water Abs.	As-is	Corrected	Weight	Proof Height	Crumb Grain	As-Rec'd.	Specific Volume	Loaf Volume Potential
	(%)	(%)	(min)	(min)	(g)	(cm)		(cc)	(cc/g)	(cc/%)
Kharkof	13.7	63.1	5.00	5.00	172.0	7.5	4.0	950	6.4	61
Scout 66	13.0	63.4	3.50	3.50	173.2	7.2	2.0	830	5.6	53
TAM 107	12.8	64.3	4.38	4.38	173.8	7.5	2.0	935	6.3	65
OK09634	13.2	64.1	5.75	5.75	173.7	7.2	4.0	950	6.4	64
OK09125	12.6	64.1	5.00	5.00	173.5	7.4	3.0	920	6.2	65
OK09528	13.5	64.1	3.25	3.25	173.1	7.3	2.0	885	5.9	56
OK09729	13.1	62.0	4.88	4.88	171.5	7.1	1.0	875	5.9	57
OK1059060	13.4	63.0	5.50	5.50	172.1	7.4	3.5	900	6.0	58
OK09915C	13.6	64.3	4.63	4.63	173.8	7.3	4.0	975	6.4	64
KS09H19-2	12.5	63.7	8.50	8.50	173.2	6.9	2.0	905	6.0	63
KS10HW78-1-1	12.2	62.2	3.38	3.38	171.5	6.9	1.5	795	5.3	54
KS10HW200-2	12.1	63.5	4.38	4.38	172.9	7.1	2.5	885	5.9	65
CO07W722-F5	11.8	62.2	6.00	5.84	171.8	7.1	3.0	850	5.7	63
CO08263	12.0	62.6	6.63	6.63	172.2	7.2	3.0	875	5.9	64
CO08346	12.6	64.1	5.50	5.50	173.2	7.3	3.0	940	6.3	67
CO08W218	12.2	63.0	6.50	6.50	173.5	6.9	3.0	860	5.7	61
NE10478	12.4	63.5	3.13	3.13	173.6	7.1	2.0	815	5.4	55
NE09517	12.3	63.6	8.25	8.25	173.0	7.2	2.0	905	6.0	65
NE09521	12.9	64.3	5.63	5.63	174.4	7.0	2.0	875	5.8	58
NW09627	12.7	64.5	5.00	5.00	173.4	7.3	2.5	900	5.9	62
HV9W08-0285	12.4	61.8	4.25	4.25	170.7	7.2	2.0	890	5.9	63
HV9W08-1624	12.7	64.5	5.75	5.75	174.4	6.9	4.0	875	5.8	59
HV9W08-1836	12.9	63.8	8.38	8.38	172.5	7.3	3.5	860	5.7	57
KS030887K-6	12.1	63.3	7.38	7.38	172.3	7.4	4.0	975	6.5	74
KS031009K-4	11.6	61.8	4.50	4.29	170.2	7.3	4.0	855	5.7	64
KS050255K-7	13.6	59.4	3.50	3.50	168.8	7.3	2.0	890	6.0	56
K040640K-1	13.4	63.0	5.25	5.25	172.7	7.4	2.5	900	6.0	58
LCH08-109	12.5	63.5	6.38	6.38	172.0	7.3	2.5	865	5.8	60
LCH09-19	13.7	64.5	4.88	4.88	173.5	7.2	3.0	890	5.9	55
LCH09-43	12.7	61.2	3.00	3.00	170.6	7.1	2.0	805	5.4	52
LCH08-80	12.5	60.6	3.13	3.13	170.4	7.1	1.5	855	5.8	58
BL11002	12.4	63.3	5.00	5.00	172.3	6.6	3.0	850	5.7	59
TX08A001249	12.8	66.6	6.25	6.25	175.2	7.4	4.0	1005	6.6	72
TX08V7173	12.8	64.9	5.38	5.38	173.9	7.3	3.0	950	6.4	66
TX08V7313	11.8	63.4	4.75	4.64	172.5	7.4	2.5	880	5.9	66
TX09A001194	12.6	64.0	6.50	6.50	173.1	7.4	4.0	930	6.2	66
TX09A001264	12.3	63.7	5.00	5.00	173.1	7.2	1.5	910	6.1	65
TX10A001006	14.2	65.8	3.00	3.00	175.2	7.4	2.0	840	5.4	48
TX10A001018	13.1	63.6	3.00	3.00	173.4	7.4	1.0	815	5.3	51
TX09D1172	13.0	63.5	4.50	4.50	173.1	7.4	4.0	955	6.3	65
TX09D1127	12.0	64.4	5.75	5.75	173.5	7.2	3.5	915	6.1	68
N10MD2020	13.2	63.5	6.50	6.50	172.6	7.4	3.5	910	6.1	60
N10MD2073	13.9	64.6	5.00	5.00	174.5	7.1	1.5	875	5.7	53

2013 SRPN Intraregional Production Zone South Central Plains



2013 SRPN Intraregional Production Zone South Central Plains



2013 SRPN Intraregional Production Zone South Central Plains

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SSC1020



SSC1021



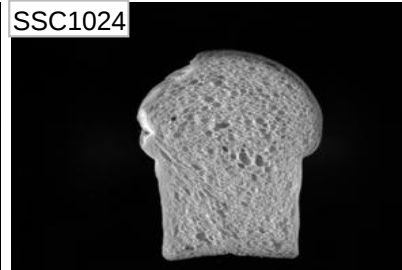
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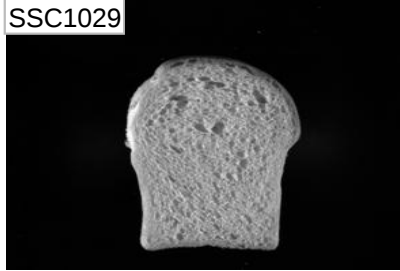


2013 SRPN Intraregional Production Zone South Central Plains

SSC1028



SSC1029



SSC1030



SSC1031



SSC1032



SC1033



SSC1034



SSC1035



SSC1036



2013 SRPN Intraregional Production Zone South Central Plains

SSC1037



SSC1038



SSC1039



SSC1040



SSC1041



SSC1042



SSC1043





Hard Winter Wheat Quality Report 2013 SRPN-SHP

- 1 - Test weight
- 2 - SKCS kernel weight
- 3 - Kernel weight SD
- 4 - SKCS kernel diameter
- 5 - Kernel diameter SD
- 6 - SKCS hardness
- 7 - Hardness SD
- 8 - Flour yield
- 9 - Flour ash
- 10 - Milling score

- 10
- 8
- 8
- 8
- 8
- 10
- 8
- 30
- 10

- 11 - Flour protein
- 12 - Bake absorption
- 13 - Mixograph absorption
- 14 - Bake mix time
- 15 - Mixograph mix time
- 16 - Mixograph tolerance
- 17 - Dough weight
- 18 - Proof height
- 19 - Loaf volume
- 20 - Volume regression
- 21 - Crumb grain

- 8
- 15
- 5
- 10
- 5
- 5
- 2
- 20
- 5
- 25

ID	Milling Score	Rating	%	Baking Score	Rating	%	1RS	Trait Deficiencies
OK09125	56.8	Very Good	100.0	46.5	Average	70.3		
KS030887K-6	53.3	Very Good	93.9	46.0	Average	69.6		9,
HV9W08-1836	53.1	Very Good	93.6	55.6	Very Good	84.2		
Scout 66	52.3	Very Good	92.1	33.6	Very Poor	50.9		16,
OK09634	52.1	Very Good	91.8	43.3	Poor	65.5		
KS031009K-4	51.8	Very Good	91.2	41.5	Poor	62.8		16,
TX09A001264	51.3	Very Good	90.3	58.2	Very Good	88.1		16,
TAM 107	50.7	Very Good	89.3	38.4	Poor	58.1	1AL	16,
TX09D1127	50.6	Good	89.0	46.1	Average	69.7		13,
Oakley CL	50.5	Good	88.9	50.1	Average	75.8		15,18,
OK09729	50.4	Good	88.8	50.3	Good	76.2		16,
TX09D1172	50.4	Good	88.8	29.0	Very Poor	43.8		12,15,16,
KS10HW78-1-1	50.4	Good	88.8	36.5	Very Poor	55.2		16,18,19,20,
OK09528	50.4	Good	88.8	31.5	Very Poor	47.7		16,
CO07W722-F5	50.3	Good	88.7	43.2	Poor	65.5		6,
CO08346	48.6	Good	85.6	56.3	Very Good	85.2		16,
LCS Wizard	48.5	Average	85.4	35.7	Very Poor	54.1		12,13,14,15,16,17,18,
Doublestop CL Plus	48.1	Average	84.8	53.0	Good	80.2		5,
OK1059060	47.9	Average	84.4	52.6	Good	79.6		
NE09517	47.8	Average	84.1	50.4	Good	76.2		14,
TX10A001006	47.4	Average	83.5	31.4	Very Poor	47.6		15,16,
BL11002	47.2	Average	83.1	60.6	Very Good	91.8		
CO08263	47.2	Average	83.1	39.7	Poor	60.0		16,
KS10HW200-2	47.0	Average	82.8	43.8	Average	66.3		11,16,21,
CO08W218	46.7	Poor	82.3	43.5	Poor	65.8		
K040640K-1	46.2	Poor	81.4	55.3	Very Good	83.7		3,5,16,
NE10478	46.0	Poor	80.9	27.0	Very Poor	40.8		12,14,16,
NW09627	45.5	Poor	80.2	44.0	Average	66.6		16,
TX08V7313	45.3	Poor	79.7	66.1	Very Good	100.0		10,
TX09A001194	44.9	Poor	79.1	51.4	Good	77.8		

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 2013 SRPN-SHP

1 - Test weight
2 - SKCS kernel weight
3 - Kernel weight SD
4 - SKCS kernel diameter
5 - Kernel diameter SD
6 - SKCS hardness
7 - Hardness SD
8 - Flour yield
9 - Flour ash
10 - Milling score

10
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11 - Flour protein
12 - Bake absorption
13 - Mixograph absorption
14 - Bake mix time
15 - Mixograph mix time
16 - Mixograph tolerance
17 - Dough weight
18 - Proof height
19 - Loaf volume
20 - Volume regression
21 - Crumb grain

8
15
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10
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25

ID	Milling		Baking				1RS	Trait Deficiencies
	Score	Rating	%	Score	Rating	%		
TX08V7173	44.4	Poor	78.3	47.1	Average	71.2		
TX10A001018	44.1	Poor	77.6	48.6	Average	73.5		
LCH09-19	40.7	Very Poor	71.7	43.0	Poor	65.1		1,16,
LCH09-43	39.2	Very Poor	69.0	22.0	Very Poor	33.3		1,9,12,14,15,16,17,19,20,
N10MD2020	37.6	Very Poor	66.3	49.7	Good	75.2		16,
NE09521	37.6	Very Poor	66.3	52.0	Good	78.8		3,16,
LCH08-109	37.6	Very Poor	66.2	62.1	Very Good	93.9		1,2,4,9,
TX08A001249	36.9	Very Poor	64.9	52.8	Good	79.9	1AL	3,8,
Kharkof	36.4	Very Poor	64.2	54.0	Very Good	81.7		2,4,9,10,16,
N10MD2073	32.3	Very Poor	56.8	39.1	Poor	59.2		2,4,8,16,
KS050255K-7	26.9	Very Poor	47.3	28.9	Very Poor	43.7		8,10,12,13,15,16,17,

2013 SRPN Intraregional Production Zone

Southern High Plains

LINE	Wt/Bu (lb)	SKCS Average Kernel						Hardness			
		Moisture		Weight		Diameter		SKCS	Class	Distribution	
		(%)	(sd)	(mg)	(sd)	(mm)	(sd)				
								(sd)			
Kharkof	58.9	7.9	0.6	19.4	5.2	2.21	0.22	54 19	MIXED	13--21--27--39--03	
Scout 66	58.3	9.2	0.7	21.9	6.1	2.34	0.26	70 17	HARD	02--06--15--77--01	
TAM 107	57.2	8.9	0.8	23.0	6.6	2.39	0.29	79 16	HARD	01--02--07--90--01	
OK09634	57.7	8.3	0.7	21.2	5.8	2.32	0.25	74 16	HARD	01--03--12--84--01	
OK09125	57.8	8.6	0.8	24.7	6.2	2.52	0.29	72 14	HARD	01--04--10--85--01	
OK09528	59.4	9.7	0.7	23.1	6.8	2.44	0.28	76 17	HARD	01--03--11--85--01	
OK09729	57.1	9.1	0.7	22.7	6.1	2.44	0.28	76 17	HARD	01--05--09--85--01	
OK1059060	59.1	9.3	0.7	23.1	5.9	2.41	0.23	73 17	HARD	02--05--12--81--01	
OK09915C	59.6	9.3	0.7	24.1	6.8	2.46	0.30	81 16	HARD	01--01--05--93--01	
KS09H19-2	59.0	9.4	0.6	23.8	6.6	2.45	0.28	84 17	HARD	01--01--06--92--01	
KS10HW78-1-1	58.7	8.9	0.8	21.8	6.0	2.39	0.27	79 16	HARD	01--03--04--92--01	
KS10HW200-2	59.5	9.6	0.7	21.8	6.8	2.36	0.27	79 19	HARD	02--04--08--86--01	
CO07W722-F5	57.0	10.5	0.6	20.3	5.3	2.28	0.22	86 16	HARD	00--01--04--95--01	
CO08263	57.0	10.2	0.6	20.2	5.9	2.27	0.24	65 17	HARD	03--11--22--64--01	
CO08346	59.0	9.4	0.7	20.7	6.5	2.30	0.26	67 19	HARD	06--07--17--70--02	
CO08W218	59.2	7.6	0.7	22.3	7.2	2.32	0.27	74 19	HARD	02--06--12--80--01	
NE10478	57.0	7.9	0.7	20.5	6.0	2.28	0.22	78 17	HARD	01--04--07--88--01	
NE09517	59.1	8.5	0.9	21.7	5.7	2.37	0.26	74 17	HARD	02--05--10--83--01	
NE09521	56.2	8.3	0.7	22.0	7.8	2.35	0.28	70 21	HARD	05--09--11--75--01	
NW09627	57.6	8.9	0.7	22.4	7.2	2.35	0.26	63 19	HARD	08--08--22--62--02	
HV9W08-0285											
HV9W08-1624											
HV9W08-1836	57.8	9.2	0.7	22.5	6.1	2.39	0.29	66 16	HARD	01--10--17--72--01	
KS030887K-6	59.5	9.6	0.6	22.5	6.1	2.42	0.26	81 16	HARD	01--02--05--92--01	
KS031009K-4	60.0	8.9	0.6	23.0	6.6	2.38	0.28	68 18	HARD	02--07--18--73--01	
KS050255K-7	56.6	8.0	0.6	22.0	6.0	2.34	0.29	44 18	MIXED	24--31--25--20--03	
K040640K-1	57.1	9.9	0.5	24.1	7.4	2.49	0.30	73 18	HARD	02--05--11--82--01	
LCH08-109	55.2	9.4	0.6	19.1	5.8	2.24	0.22	68 21	HARD	07--08--17--68--02	
LCH09-19	55.6	9.6	0.5	22.3	7.1	2.31	0.29	65 16	HARD	05--10--17--68--01	
LCH09-43	54.4	8.8	0.6	23.0	7.1	2.42	0.29	65 20	HARD	07--06--18--69--02	
LCH08-80	58.6	7.9	0.6	20.3	5.3	2.34	0.22	79 16	HARD	02--03--06--89--01	
BL11002	58.3	8.7	0.7	22.2	6.9	2.40	0.27	77 17	HARD	01--02--09--88--01	
TX08A001249	58.4	7.5	0.6	21.4	7.8	2.34	0.29	80 19	HARD	01--04--10--85--01	
TX08V7173	58.5	8.8	0.7	20.7	6.8	2.31	0.26	74 21	HARD	03--11--09--77--01	
TX08V7313	59.7	9.2	0.6	21.0	6.4	2.36	0.27	84 17	HARD	01--02--07--90--01	
TX09A001194	59.7	9.0	0.6	23.6	7.1	2.41	0.27	79 16	HARD	01--04--06--89--01	
TX09A001264	61.1	8.2	0.7	20.5	5.3	2.37	0.24	80 17	HARD	01--02--08--89--01	
TX10A001006	56.8	9.0	0.6	21.4	5.8	2.41	0.25	82 16	HARD	01--02--05--92--01	
TX10A001018	58.7	8.6	0.7	22.2	7.0	2.39	0.29	76 18	HARD	01--04--11--84--01	
TX09D1172	58.3	9.2	0.6	22.7	6.2	2.45	0.26	77 16	HARD	01--02--09--88--01	
TX09D1127	60.0	9.7	0.5	22.4	6.1	2.40	0.26	85 16	HARD	00--02--04--94--01	
N10MD2020	56.1	9.6	0.5	23.0	7.0	2.39	0.26	72 17	HARD	01--05--15--79--01	
N10MD2073	58.4	7.7	0.6	19.7	6.0	2.26	0.24	74 20	HARD	03--05--12--80--01	

2013 SRPN Intraregional Production Zone

Southern High Plains

LINE	Wheat		Flour			Noodle Color					
	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	16.4	63.4	0.58	14.8	0.629	79.27	-2.14	25.05	-13.36	1.53	-0.11
Scout 66	14.2	70.3	0.54	13.6	0.647	79.03	-1.73	24.43	-14.20	1.62	1.85
TAM 107	13.7	68.5	0.53	12.6	0.641	78.66	-1.74	25.99	-12.32	1.44	1.92
OK09634	14.1	69.1	0.51	13.4	0.212	80.82	-2.49	25.86	-10.32	1.17	2.12
OK09125	13.6	69.0	0.42	12.4	0.645	80.61	-1.92	23.40	-11.33	0.98	4.34
OK09528	14.3	66.5	0.46	13.2	0.632	81.69	-2.17	23.23	-13.13	1.16	4.41
OK09729	14.4	67.4	0.46	13.4	0.678	78.84	-1.68	25.03	-11.42	1.41	1.06
OK1059060	14.6	65.5	0.50	13.2	0.689	82.30	-2.40	23.95	-13.01	1.55	3.38
OK09915C	15.8	64.4	0.48	13.9	0.588	78.95	-1.77	24.38	-12.88	1.39	1.06
KS09H19-2	14.3	66.1	0.50	12.9	0.177	81.03	-1.75	23.85	-9.70	0.87	4.95
KS10HW78-1-1	13.8	67.0	0.51	12.5	0.667	81.26	-2.09	23.52	-11.19	0.73	2.58
KS10HW200-2	13.5	65.5	0.47	12.2	0.570	82.27	-2.68	24.94	-11.53	1.27	2.86
CO07W722-F5	14.4	66.5	0.51	13.1	0.233	80.66	-2.36	22.32	-10.10	1.10	6.47
CO08263	14.2	68.3	0.51	13.1	0.707	80.00	-2.45	24.87	-13.16	1.66	1.77
CO08346	14.7	68.1	0.46	13.8	0.733	78.89	-2.39	24.03	-12.56	1.81	2.71
CO08W218	13.9	66.6	0.50	13.0	0.684	81.28	-2.17	24.65	-12.21	1.25	2.11
NE10478	14.6	66.3	0.54	13.4	0.657	80.21	-2.00	24.00	-11.56	1.19	2.57
NE09517	14.0	66.3	0.54	12.8	0.716	81.65	-2.14	22.14	-13.58	0.95	4.04
NE09521	14.8	64.0	0.48	14.0	0.341	81.25	-1.82	24.61	-8.95	0.55	2.12
NW09627	13.9	68.2	0.51	13.0	0.333	82.61	-2.85	26.18	-9.28	1.02	1.98
HV9W08-0285											
HV9W08-1624											
HV9W08-1836	14.3	69.9	0.48	13.4	0.661	80.58	-2.52	26.32	-14.66	1.86	0.22
KS030887K-6	14.7	68.7	0.56	13.5	0.613	80.51	-1.76	23.90	-13.87	1.35	3.33
KS031009K-4	14.2	69.0	0.50	13.4	0.490	79.66	-2.37	25.43	-14.35	1.68	-1.20
KS050255K-7	16.3	54.6	0.52	15.3	0.324	79.47	-1.92	24.10	-14.31	1.43	-1.31
K040640K-1	15.0	67.2	0.52	14.4	0.328	79.28	-2.18	26.94	-13.46	1.44	-0.13
LCH08-109	15.1	65.5	0.56	14.3	0.611	80.74	-1.50	21.77	-16.53	1.45	3.47
LCH09-19	16.3	65.5	0.52	15.4	0.703	78.43	-2.01	23.17	-15.15	2.00	-1.70
LCH09-43	15.8	66.8	0.57	14.7	0.630	76.36	-1.66	24.18	-19.02	2.05	-1.24
LCH08-80	14.7	65.1	0.49	13.4	0.600	80.83	-2.17	25.45	-12.42	1.62	1.13
BL11002	14.9	65.4	0.46	13.7	0.282	81.46	-2.24	24.45	-9.13	0.69	4.12
TX08A001249	14.4	61.2	0.49	13.2	0.558	80.43	-1.79	23.59	-12.09	1.10	2.34
TX08V7173	15.5	66.2	0.47	14.2	0.559	79.68	-1.75	23.72	-11.35	1.30	0.95
TX08V7313	15.1	64.0	0.52	13.3	0.708	79.26	-2.10	25.74	-12.28	1.37	2.67
TX09A001194	15.0	62.9	0.48	13.3	0.621	80.06	-1.88	24.41	-12.31	1.40	3.37
TX09A001264	14.4	65.0	0.45	13.1	0.543	79.76	-1.95	24.38	-10.67	0.98	2.17
TX10A001006	15.0	64.3	0.44	13.8	0.517	80.06	-1.78	23.94	-13.41	1.08	2.72
TX10A001018	14.4	64.3	0.48	13.2	0.607	80.54	-2.17	25.72	-11.55	1.20	0.62
TX09D1172	14.5	66.5	0.48	13.3	0.588	81.00	-2.07	24.65	-13.00	1.10	2.73
TX09D1127	14.7	65.3	0.49	13.1	0.634	80.66	-2.11	24.77	-12.00	1.22	4.06

LINE	Wheat		Flour			Noodle Color					
	Protein	Milling Yield	Ash	Protein	PPO	L @ 0	a @ 0	b @ 0	Delta L 24 hrs	Delta a 24 hrs	Delta b 24 hrs
	(%)	(%)	(%)	(%)							
N10MD2020	14.4	61.8	0.50	13.3	0.569	79.99	-2.26	25.19	-13.34	1.21	2.93
N10MD2073	16.4	58.3	0.51	15.3	0.683	78.96	-2.15	24.03	-14.88	1.47	-0.23

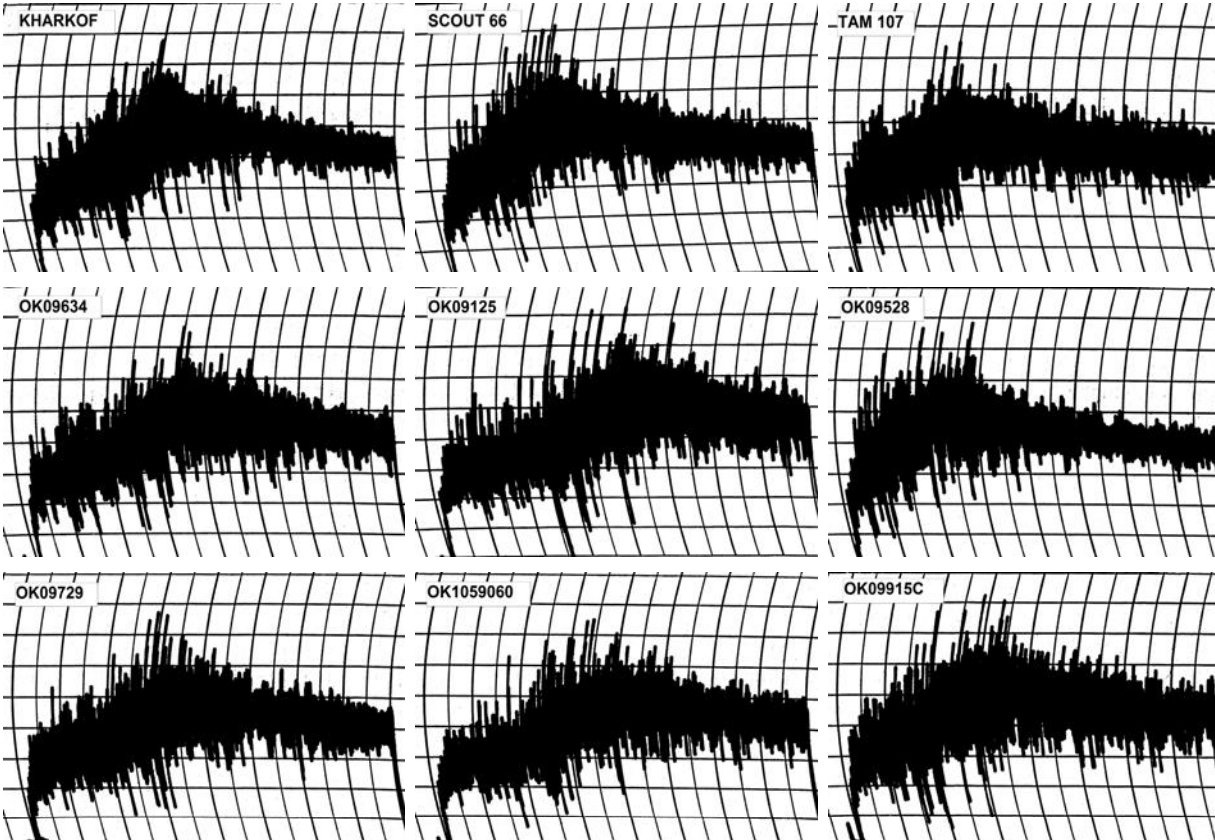
2013 SRPN Intraregional Production Zone

Southern High Plains

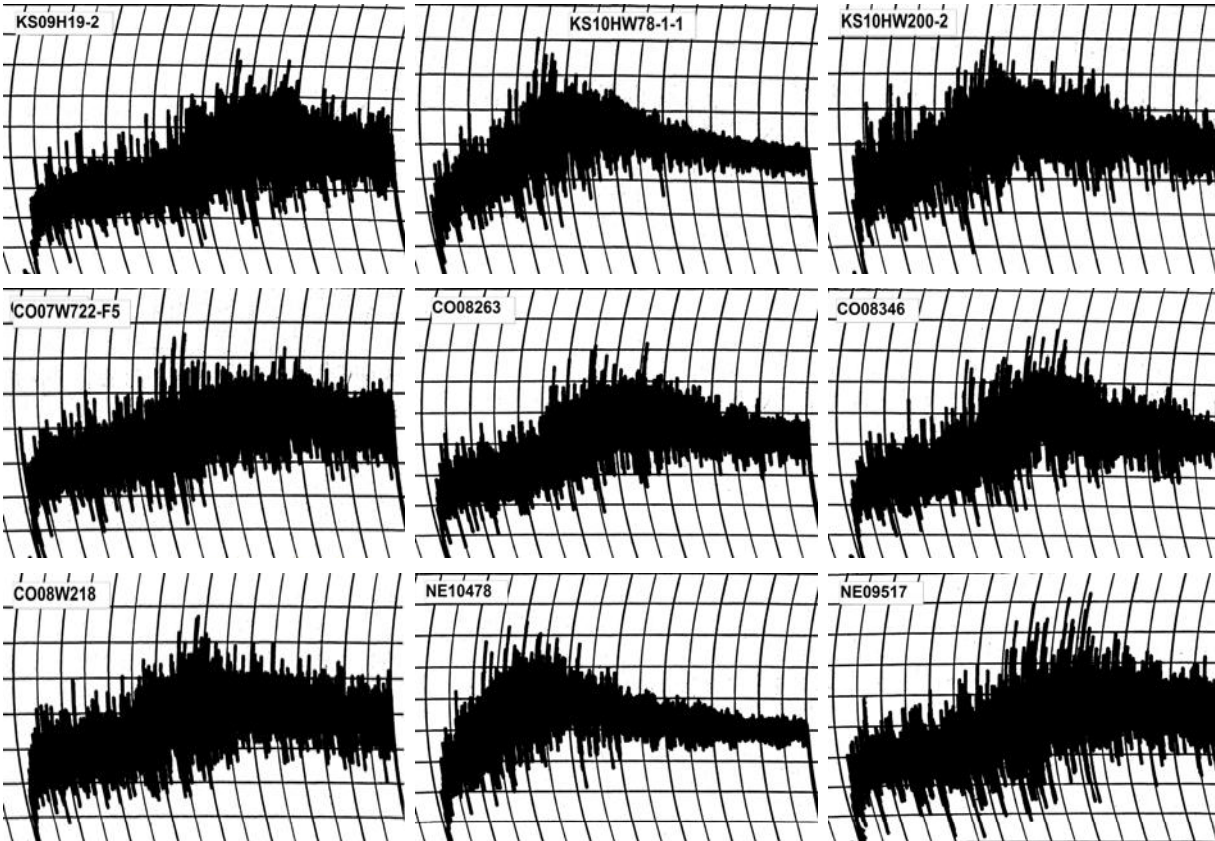
	Flour Protein	Mixograph			
		Absorption	As-Is	Corrected	Tolerance
Line	(%)	(%)	(min)	(min)	
Kharkof	14.8	64.7	3.13	3.13	1
Scout 66	13.6	64.6	2.63	2.63	2
TAM 107	12.6	62.9	2.63	2.63	2
OK09634	13.4	63.2	3.88	3.88	3
OK09125	12.4	63.7	4.25	4.25	4
OK09528	13.2	64.0	2.38	2.38	1
OK09729	13.4	63.8	3.38	3.38	2
OK1059060	13.2	64.5	3.88	3.88	3
OK09915C	13.9	65.2	3.38	3.38	3
KS09H19-2	12.9	64.4	5.75	5.75	4
KS10HW78-1-1	12.5	62.8	3.13	3.13	0
KS10HW200-2	12.2	63.3	3.38	3.38	2
CO07W722-F5	13.1	64.2	4.50	4.50	4
CO08263	13.1	62.7	4.13	4.13	2
CO08346	13.8	64.5	4.38	4.38	2
CO08W218	13.0	63.6	4.00	4.00	4
NE10478	13.4	63.8	2.38	2.38	0
NE09517	12.8	62.7	5.00	5.00	4
NE09521	14.0	63.8	4.50	4.50	2
NW09627	13.0	63.1	3.38	3.38	2
HV9W08-0285					
HV9W08-1624					
HV9W08-1836	13.4	63.2	4.50	4.50	4
KS030887K-6	13.5	64.1	4.63	4.63	4
KS031009K-4	13.4	63.7	3.13	3.13	1
KS050255K-7	15.3	61.9	2.00	2.00	0
K040640K-1	14.4	63.5	3.38	3.38	1
LCH08-109	14.3	63.7	3.50	3.50	3
LCH09-19	15.4	64.6	3.13	3.13	1
LCH09-43	14.7	63.5	1.63	1.63	0
LCH08-80	13.4	62.3	2.00	2.00	1
BL11002	13.7	63.3	3.63	3.63	3
TX08A001249	13.2	64.5	4.50	4.50	5
TX08V7173	14.2	64.6	3.25	3.25	3
TX08V7313	13.3	64.1	4.00	4.00	4
TX09A001194	13.3	64.1	4.00	4.00	4
TX09A001264	13.1	63.7	3.50	3.50	1
TX10A001006	13.8	64.5	2.13	2.13	1
TX10A001018	13.2	63.9	3.50	3.50	3
TX09D1172	13.3	64.0	2.00	2.00	2
TX09D1127	13.1	62.3	3.50	3.50	3
N10MD2020	13.3	62.6	2.88	2.88	2

Line	Flour Protein (%)	Mixograph			
		Absorption (%)	As-Is (min)	Corrected (min)	Tolerance
N10MD2073	15.3	64.0	3.25	3.25	0

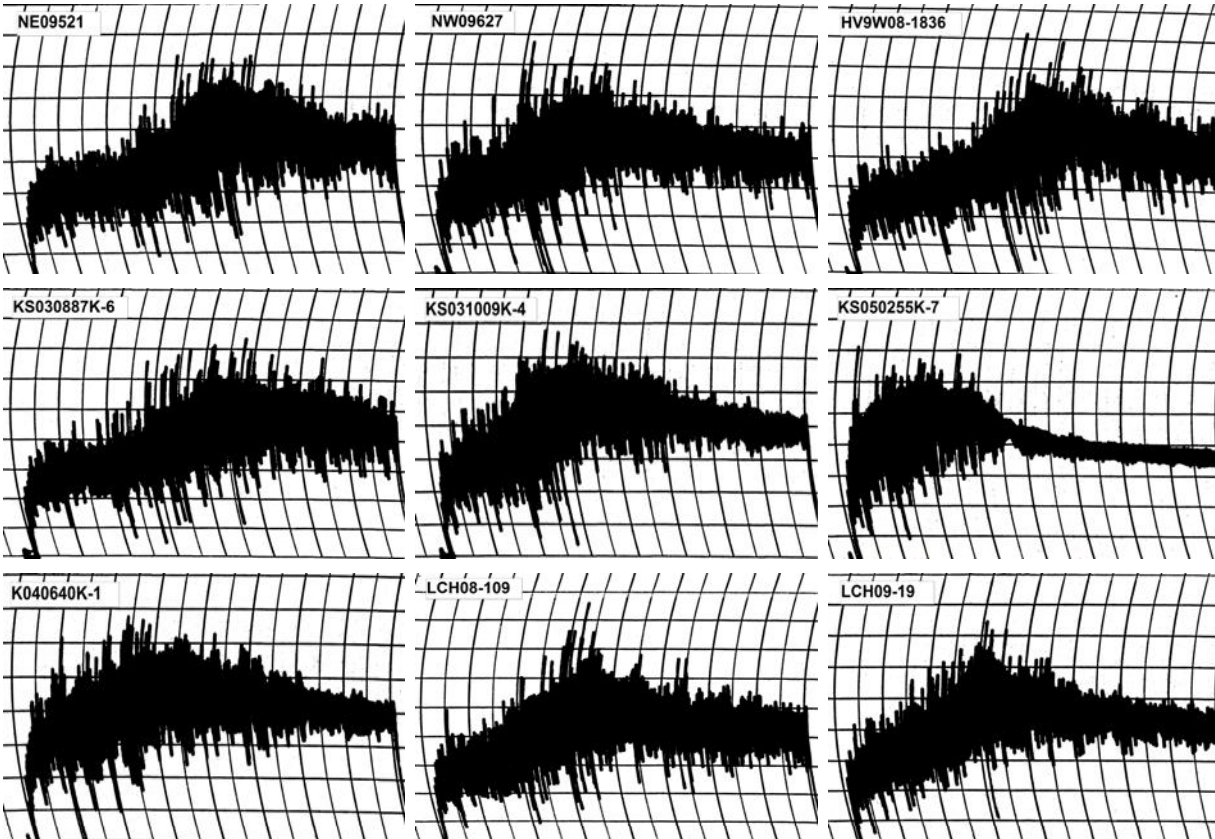
2013 SRPN Intraregional Production Zone Southern High Plains



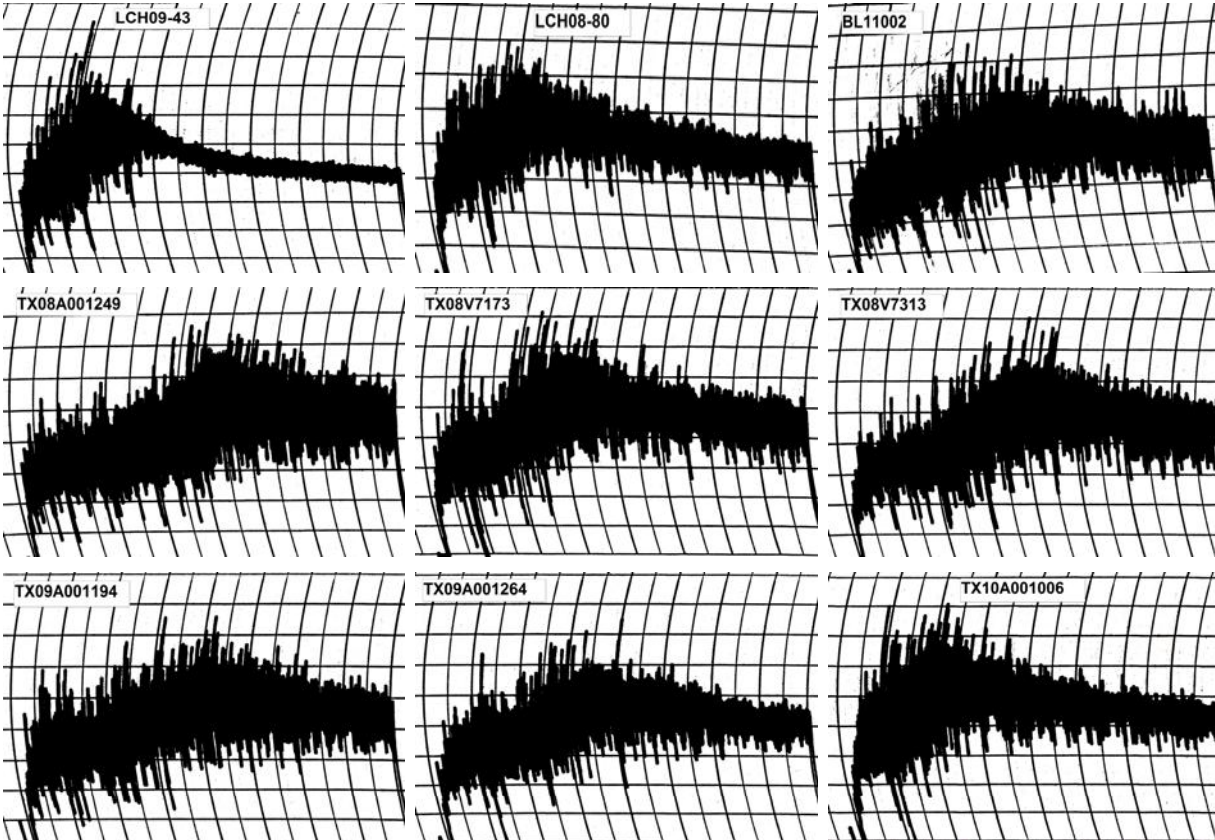
2013 SRPN Intraregional Production Zone Southern High Plains



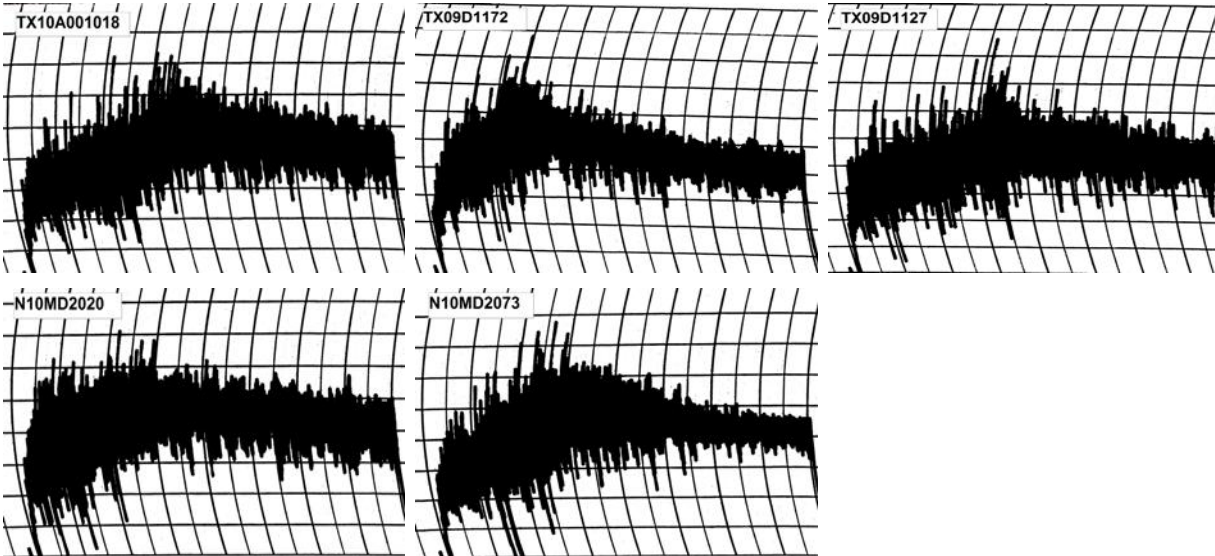
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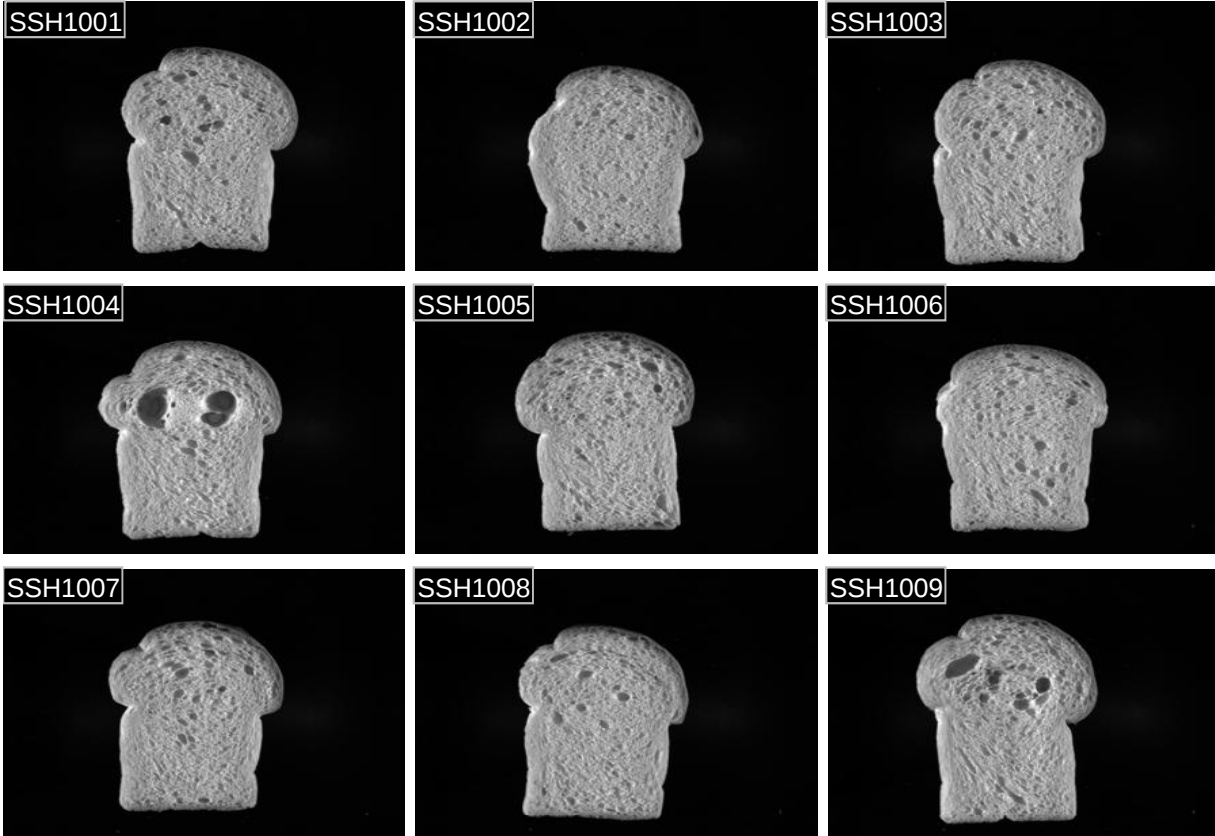
Line	RVA						
	Stirring Number (RVU)	Peak Viscosity (RVU)	Trough Viscosity (RVU)	Breakdown (RVU)	Final Viscosity (RVU)	Set back (RVU)	Peak Time (min)
Kharkof	168.33	189.17	164.08	25.08	263.08	99.00	6.60
Scout 66	142.92	182.00	150.75	31.25	262.17	111.42	6.27
TAM 107	156.67	238.67	194.17	44.50	314.33	120.17	6.53
OK09634	147.08	205.00	172.50	32.50	284.33	111.83	6.53
OK09125	133.83	242.75	183.33	59.42	316.92	133.58	6.40
OK09528	106.50	230.83	167.50	63.33	287.08	119.58	6.33
OK09729	154.83	174.42	151.08	23.33	263.17	112.08	6.40
OK1059060	148.08	204.25	167.92	36.33	286.08	118.17	6.40
OK09915C	156.00	208.08	171.58	36.50	282.17	110.58	6.47
KS09H19-2	138.67	217.42	172.42	45.00	295.00	122.58	6.33
KS10HW78-1-1	142.17	248.83	188.50	60.33	310.08	121.58	6.47
KS10HW200-2	147.58	255.58	200.17	55.42	326.33	126.17	6.53
CO07W722-F5	140.17	185.42	157.08	28.33	285.50	128.42	6.33
CO08263	110.92	222.33	162.25	60.08	281.33	119.08	6.27
CO08346	153.67	246.17	190.42	55.75	302.33	111.92	6.60
CO08W218	172.00	197.92	173.92	24.00	277.58	103.67	6.60
NE10478	159.50	176.17	152.42	23.75	265.00	112.58	6.40
NE09517	127.67	199.00	157.42	41.58	289.08	131.67	6.20
NE09521	158.25	193.75	168.33	25.42	278.67	110.33	6.53
NW09627	135.92	195.92	159.25	36.67	281.00	121.75	6.27
HV9W08-0285							
HV9W08-1624							
HV9W08-1836	138.00	187.67	155.75	31.92	276.42	120.67	6.33
KS030887K-6	155.83	182.58	155.67	26.92	261.50	105.83	6.53
KS031009K-4	121.17	196.17	150.42	45.75	260.83	110.42	6.27
KS050255K-7	163.92	196.50	166.33	30.17	269.67	103.33	6.67
K040640K-1	143.08	187.25	161.67	25.58	278.42	116.75	6.53
LCH08-109	131.83	194.50	148.00	46.50	251.00	103.00	6.33
LCH09-19	160.00	214.83	179.42	35.42	281.17	101.75	6.73
LCH09-43	135.33	191.08	149.50	41.58	260.92	111.42	6.33
LCH08-80	131.50	212.42	168.08	44.33	292.58	124.50	6.40
BL11002	124.50	228.25	173.75	54.50	296.08	122.33	6.40
TX08A001249	130.75	267.50	205.42	62.08	331.00	125.58	6.60
TX08V7173	136.67	215.67	176.67	39.00	282.75	106.08	6.53
TX08V7313	155.00	194.00	167.67	26.33	280.33	112.67	6.53
TX09A001194	143.67	219.42	181.33	38.08	299.42	118.08	6.47
TX09A001264	153.25	210.50	172.83	37.67	284.75	111.92	6.47
TX10A001006	141.50	224.00	183.17	40.83	312.67	129.50	6.47
TX10A001018	137.75	210.92	172.42	38.50	291.92	119.50	6.40
TX09D1172	134.67	186.67	166.50	20.17	290.42	123.92	6.47
TX09D1127	105.00	211.17	165.75	45.42	288.17	122.42	6.33
N10MD2020	155.17	211.25	184.83	26.42	307.83	123.00	6.67
N10MD2073	144.42	203.17	161.42	41.75	256.75	95.33	6.53

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Line	Flour		Mix Time		Dough					
	Protein	Water Abs.	As-is	Corrected	Weight	Proof Height	Crumb Grain	As-Rec'd.	Specific Volume	Loaf Volume Potential
	(%)	(%)	(min)	(min)	(g)	(cm)		(cc)	(cc/g)	(cc/%)
Kharkof	14.8	63.6	4.00	4.00	173.2	7.6	3.0	935	6.2	54
Scout 66	13.6	63.5	3.13	3.13	173.3	7.5	2.5	835	5.6	51
TAM 107	12.6	63.0	4.00	4.00	172.6	7.3	3.5	910	6.1	64
OK09634	13.4	63.2	4.75	4.75	172.8	7.3	3.5	885	6.0	56
OK09125	12.4	64.4	5.25	5.25	174.2	7.4	2.5	935	6.3	67
OK09528	13.2	63.2	3.00	3.00	172.9	7.0	2.5	855	5.7	54
OK09729	13.4	64.2	4.00	4.00	173.2	7.3	3.0	885	5.9	56
OK1059060	13.2	64.4	5.25	5.25	173.6	7.1	3.0	860	5.7	55
OK09915C	13.9	66.5	4.75	4.75	176.2	7.7	3.5	1005	6.6	65
KS09H19-2	12.9	64.5	7.00	7.00	173.4	6.9	4.0	895	5.9	60
KS10HW78-1-1	12.5	61.6	3.38	3.38	171.5	6.9	3.0	765	5.1	49
KS10HW200-2	12.2	63.8	4.50	4.50	172.9	7.0	2.0	860	5.7	61
CO07W722-F5	13.1	63.8	5.25	5.25	174.0	7.4	3.5	880	5.8	58
CO08263	13.1	63.3	5.75	5.75	173.3	7.5	2.5	880	5.9	58
CO08346	13.8	64.6	5.13	5.13	174.4	7.4	3.0	945	6.3	59
CO08W218	13.0	63.5	5.00	5.00	172.5	7.0	2.5	875	5.9	58
NE10478	13.4	60.9	2.50	2.50	170.7	7.1	2.5	860	5.8	54
NE09517	12.8	64.6	7.75	7.75	173.1	7.1	4.0	920	6.2	63
NE09521	14.0	63.8	5.63	5.63	173.1	7.1	3.0	935	6.2	58
NW09627	13.0	64.2	5.00	5.00	173.8	7.1	3.5	915	6.0	62
HV9W08-0285										
HV9W08-1624										
HV9W08-1836	13.4	62.3	6.13	6.13	171.0	7.5	4.0	920	6.2	60
KS030887K-6	13.5	63.3	6.38	6.38	172.7	7.6	5.5	1015	6.9	68
KS031009K-4	13.4	61.5	4.88	4.88	170.8	7.4	3.5	925	6.2	60
KS050255K-7	15.3	59.5	2.75	2.75	168.4	7.5	2.5	905	6.2	49
K040640K-1	14.4	62.2	3.63	3.63	170.8	7.6	4.0	940	6.4	56
LCH08-109	14.3	63.5	5.25	5.25	172.8	7.5	4.0	960	6.5	58
LCH09-19	15.4	63.2	4.13	4.13	172.7	7.7	4.5	945	6.4	52
LCH09-43	14.7	59.7	2.38	2.38	169.0	7.1	2.5	810	5.5	44
LCH08-80	13.4	60.6	2.50	2.50	170.1	6.9	3.0	875	6.0	55
BL11002	13.7	63.5	4.63	4.63	171.9	7.2	4.0	945	6.5	60
TX08A001249	13.2	64.5	5.75	5.75	173.3	7.9	3.5	1075	7.3	76
TX08V7173	14.2	64.4	4.00	4.00	173.9	7.6	3.5	1000	6.7	63
TX08V7313	13.3	64.0	5.00	5.00	173.4	7.7	4.0	1000	6.7	68
TX09A001194	13.3	64.1	4.75	4.75	173.3	7.7	3.5	1010	6.8	69
TX09A001264	13.1	63.7	4.25	4.25	173.0	7.6	4.0	960	6.4	66
TX10A001006	13.8	62.2	3.00	3.00	171.9	7.4	3.5	885	5.9	54
TX10A001018	13.2	65.0	4.63	4.63	174.1	7.8	4.5	970	6.5	66
TX09D1172	13.3	61.1	2.75	2.75	170.9	7.4	2.5	875	5.8	56
TX09D1127	13.1	64.3	4.00	4.00	173.9	7.4	3.5	995	6.6	69
N10MD2020	13.3	62.9	3.50	3.50	172.5	7.5	3.0	965	6.5	65
N10MD2073	15.3	63.6	3.75	3.75	173.2	7.5	3.5	915	6.1	50

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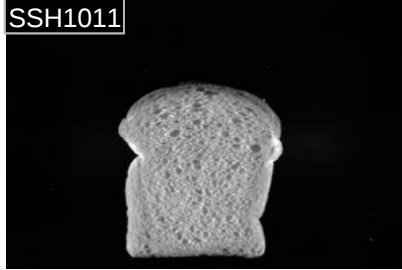


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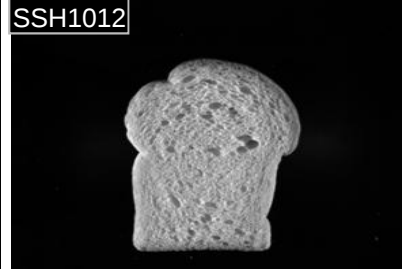
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SSH1011



SSH1012



SSH1013



SSH1014



SSH1015



SSH1016



SSH1017



SSH1018



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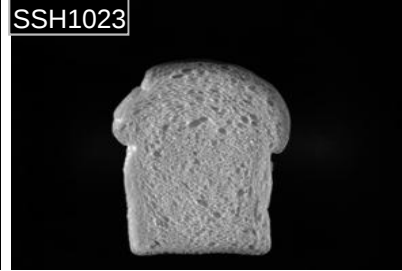
SSH1019



SSH1020



SSH1023



SSH1024



SSH1025



SSH1026



SSH1027



SSH1028



SSH1029



2013 SRPN Intraregional Production Zone Southern High Plains

SSH1030



SSH1031



SSH1032



SSH1033



SSH1034



SSH1035



SSH1036



SSH1037



SSH1038



2013 SRPN Intraregional Production Zone Southern High Plains

SSH1039



SSH1040



SSH1041



SSH1042



SSH1043





Thank you for reviewing this report on milling and baking data of 2013 Regional Performance Nursery samples.
Please let me know if you have any comments on this report. I can be reached at (785) 776-2750 or by email,
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