

2014 Hard Winter Wheat Regional Performance Nursery Quality Report



Hard Winter Wheat Quality Laboratory

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Hard Winter Wheat Quality Laboratory

About the 2014 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)

Lincoln, NE (40)
North Platte, NE (40)
St. Paul, MN (40)
Crookston, MN (40)
Brookings, SD (40)
Dakota Lakes/ (Pierre), SD (40)
Winner, SD (40)

Northern Plains (NP)

Casselton, ND (40)
Minot, ND (40)
NDSU, ND (0)
Westbred, ND (0)
Bozeman, MT (40)
Moccasin, MT (40)
Williston, ND (0)

Northern High Plains (NHP)

Alliance, NE (40)
Archer, WY (40)
Sidney, NE (40)
Wichita, KS (40)

Southern Regional Performance Nursery (SRPN)

North Central Plains (NCP)

Crawfordsville, IA (0)
Clay center, NE (40)
Lincoln, NE (40)
Salina, KS (0)
Manhattan, KS (39* note no sample #1 Kharkof)
Brookings, SD (40)
Dakota Lakes/ (Pierre), SD (40)
Winner, SD (40)

Northern High Plains (NHP)

Colby, KS (40)
Julesburg, CO (40)
North Platte, NE (40)
Alliance, NE (40)
Lingle, WY (40)
Sidney, NE (40)
Arkon, CO (40)
Burlington, CO (40)
Ft. Collins, CO (40)
Farmington, NM (40)

South Central Plains (SCP)

Bushland-irr, TX (40)
Goodwell-irr, OK (40)
Hays, KS (40)
Hutchison, KS (0)
Haven/Windfield, KS (0)
Lahoma, OK (40)
Wichita, KS (40)
Granite, OK (40)
Chillicothe, TX (40)
Dallas/Prosper, TX (40)
McGregor, TX (40)
Stillwater, OK (40)

Southern High Plains (SHP)

Bushland-dry, TX (0)
Clovis-dry, NM (0)
Clovis-irr, NM (0)
Garden City, KS (0)
Walsh/Springfield, CO (40)

HWWQL Laboratory Analyses

About the HWWQL Quality Data ...

Milling, flour chemical, physical dough, breadmaking, noodlemaking properties and flour protein analysis of 2014 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

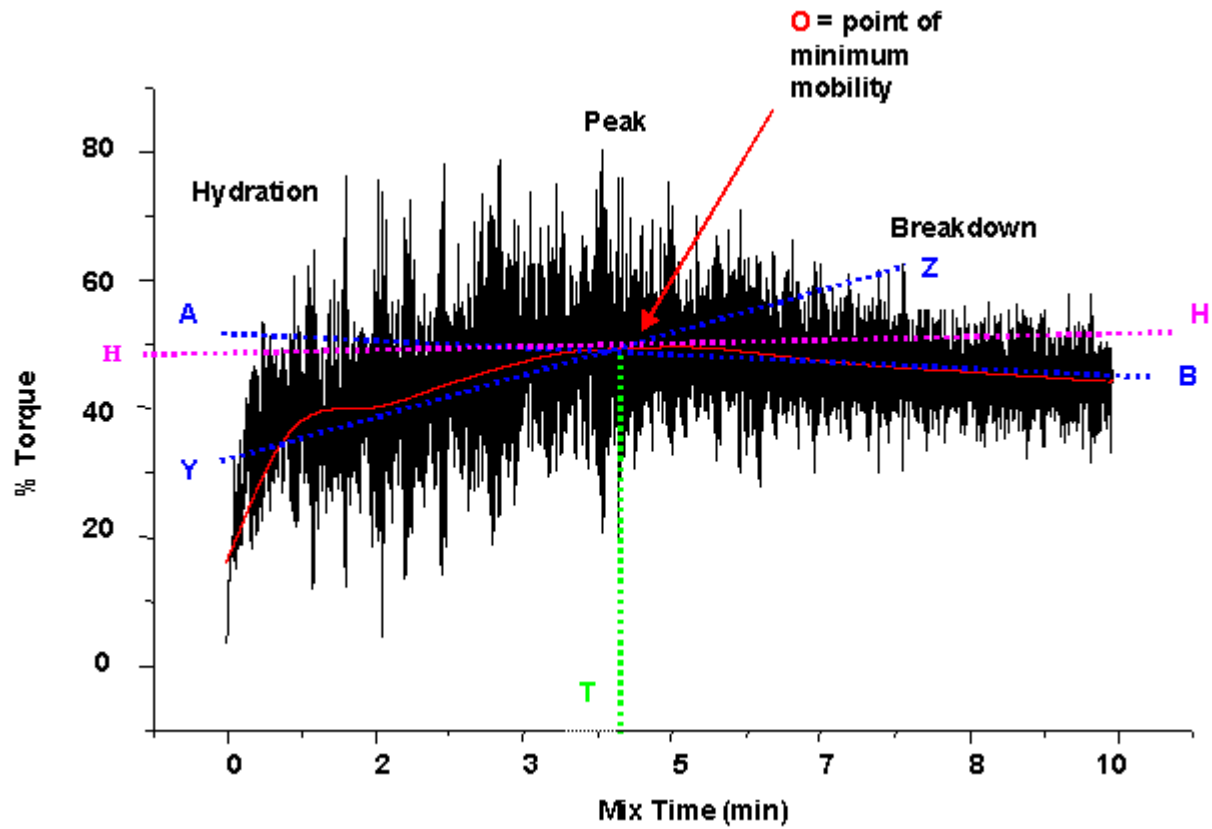
- Ash (FA) = flour ash content (%) on 14% mb. (AACC Method 08-01)
- Protein (FP) = flour protein content (%) on 14% mb. (AACC Method 46-30 or 39-11)
- Color (dry flour) = Minolta method
- PPO = polyphenol oxidase activity defined as a change of 0.001 absorbance unit (AU)/min/mL

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).

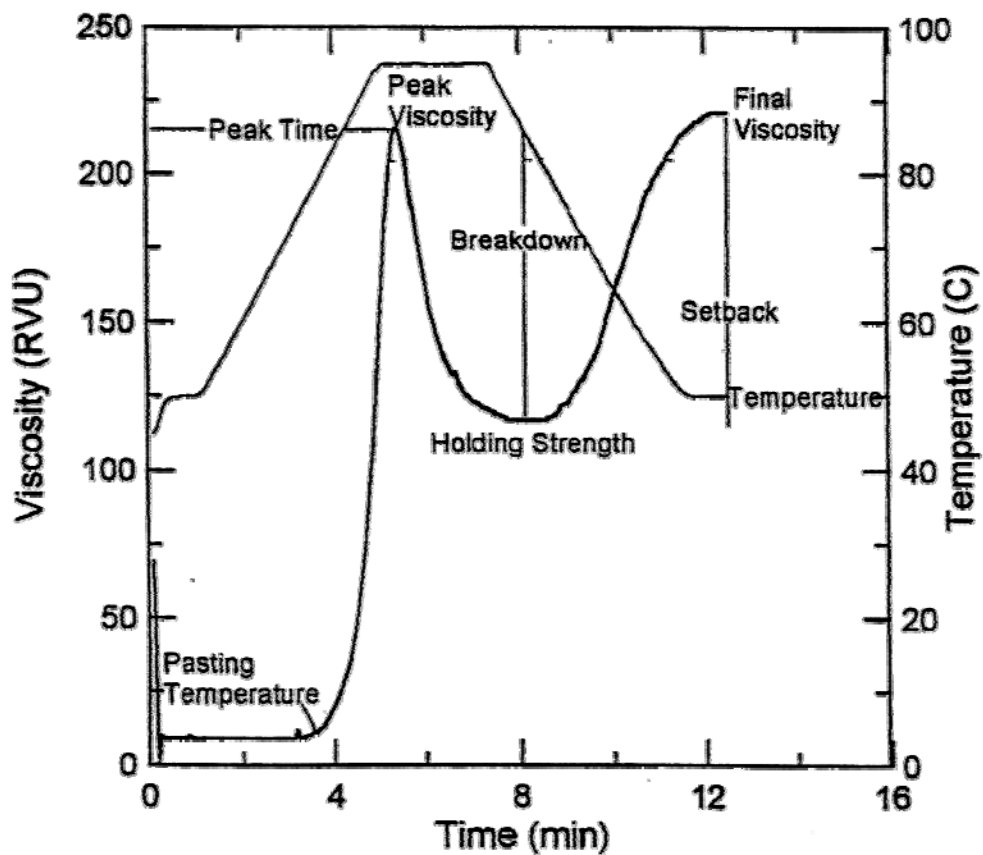
Mixogram Curve



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.

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

2014 NRPN-NHP

List of Entries

Entry	ID (Name)	Pedigree
1	Kharkof	Landrace
2	Overland	Millennium sib // Seward / Archer
3	Wesley	KS831936-3/NE86501=Sumner sib (Plainsman V/Odesskaya 51)//Colt/Cody
4	Jagalene	Abilene/Jagger
5	Jerry	Roughrider/ND7571//Arapahoe
6	NX04Y2107W	NW98S061/99Y1442
7	NX11MD2337	NE98466/NWX03Y2450//NX02Y4549
8	N11MD2129W	RonL/SD01W064
9	N11MD2157W	Mace/SD98W175-1
10	N11MD2166W	Mace/SD98W175-1
11	N11MD2172	KS03HW155-2/N02Y5078//97x0850-16
12	LCH11-147	P7318 / P2643 // 92PAN1#33
13	LCH10-187	B88/2180//T81-1
14	LCH11-1064	T158/T153
15	LCH09-06	Provinciale/Vision10
16	LCH13NEDH-14-53	NW03681 / SD07W084
17	NE10507	McGill/Harry//NE87612 (=NWT//WRR*5/AGT/3/NE69441)
18	NE10589	OK98697/Jagalene//Camelot
19	NHH11569	NH01048/TEAL//NH01036
20	NI09710H	NH01023/W97-234
21	NW09627	KS96HW115/NW99L068=(KS84HW1968/3/RIOBLANCO/HBY762A//HALT)
22	NI10718W	SD97W609=(Abilene/Karl)/NW98S097=(WA691213-27/N86L177//AP-WI89-
23	NE10683	NE01481=(OK83201/REDLAND//IKE)/Harry=(NE90614
24	Flourish	RL4746/Blizzard//CDC Kestrel/3/CDC Falcon
25	Emerson	McClintock/CDC Osprey
26	NH11490	NH01023/WESLEY//NE00403
27	HV9W06-505	G982231/G982159//KS920709W
28	FA9W10-6012R	
29	MT1078	MT02113*4/MTS0359
30	MT1090	Reeder/6*Yellowstone
31	SD08080	SD97059-2/G980723
32	SD08200	Wesley/KS91048-L-2-1//NE93613/Wendy
33	SD09113	Jerry/Ning7840//KS920946-B-15-2/Wendy
34	SD09118	WESLEY/NING7840//SD97380-2/WENDY
35	SD09138	SD92107-5/OK94P549-99-6704//Jagalene/Wendy
36	SD09192	Harding/Trego//Trego/Wendy
37	SD09227	SD97088/KS920709-B-5-2//Jagalene/Wendy
38	SD10257-2	RANSOM/SD96240-3-1
39	SD10W153	WESLEY/OK00611W
40	SD110060-9	98X0435-15/OVERLAND

Note: NX04Y2107W for No. 6 and NX11MD2337 for No. 7 are waxy wheat.



Hard Winter Wheat Quality Report 2014 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	44.9	Very Poor	74.7	46.7	Average	63.4		6,16,
Overland	52.6	Good	87.5	44.8	Poor	60.9		12,16,
Wesley	54.3	Good	90.4	73.6	Very Good	100.0		
Jagalene	51.6	Average	85.9	45.4	Poor	61.7		
Jerry	50.9	Average	84.6	56.5	Good	76.7		16,
NX04Y2107W	38.0	Very Poor	63.2	44.6	Poor	60.6		8,16,21,
NX11MD2337	39.4	Very Poor	65.5	53.0	Average	72.0		8,16,21,
N11MD2129W	47.8	Very Poor	79.5	64.8	Very Good	88.0		9,
N11MD2157W	51.9	Average	86.3	47.7	Average	64.8		13,16,
N11MD2166W	48.2	Poor	80.3	51.6	Average	70.1		12,
N11MD2172	44.5	Very Poor	74.0	46.1	Average	62.6		14,15,
LCH11-147	49.0	Poor	81.6	56.8	Good	77.2		16,
LCH10-187	48.5	Poor	80.7	37.9	Poor	51.5		16,
LCH11-1064	49.7	Poor	82.7	37.6	Very Poor	51.1		10,16,
LCH09-06	55.4	Very Good	92.2	39.9	Poor	54.2		16,
LCH13NEDH-14-53	49.3	Poor	82.0	34.2	Very Poor	46.5		3,5,9,16,
NE10507	49.9	Poor	83.1	45.7	Poor	62.0		
NE10589	53.6	Good	89.2	55.5	Good	75.4		
NHH11569	55.3	Very Good	92.0	54.0	Good	73.3		16,
NI09710H	52.7	Good	87.7	34.3	Very Poor	46.5		1,12,16,21,
NW09627	52.3	Good	87.1	64.8	Very Good	88.0		16,
NI10718W	57.0	Very Good	94.9	38.6	Very Poor	52.5		11,13,
NE10683	52.3	Good	87.1	52.3	Average	71.0		11,17,
Flourish	51.0	Average	84.9	68.9	Very Good	93.5		
Emerson	60.1	Very Good	100.0	55.5	Good	75.3		2,4,14,15,
NH11490	52.4	Average	87.3	59.2	Very Good	80.4		16,
HV9W06-505	57.8	Very Good	96.2	44.2	Poor	60.1		16,18,20,
FA9W10-6012R	54.4	Good	90.5	68.4	Very Good	92.9		9,10,16,
MT1078	45.6	Very Poor	75.9	43.6	Poor	59.2		1,4,
MT1090	44.3	Very Poor	73.7	52.9	Good	71.9		1,14,15,

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



Hard Winter Wheat Quality Report 2014 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		Baking				1RS	Trait Deficiencies
	Score	Rating	%	Score	Rating	%		
SD08080	58.5	Very Good	97.4	58.8	Very Good	79.9		
SD08200	58.5	Very Good	97.3	51.5	Average	69.9		14,
SD09113	49.9	Poor	83.1	34.2	Very Poor	46.5		12,16,
SD09118	51.2	Average	85.2	37.2	Very Poor	50.5		18,
SD09138	52.5	Good	87.4	59.5	Very Good	80.8		16,
SD09192	46.1	Very Poor	76.7	57.4	Good	78.0	1AL	3,5,10,
SD09227	51.8	Average	86.2	45.7	Average	62.1		2,16,17,
SD10257-2	58.2	Very Good	96.9	29.5	Very Poor	40.0		12,15,16,19,20,21,
SD10W153	52.0	Average	86.5	35.3	Very Poor	48.0		18,
SD110060-9	49.6	Poor	82.6	54.0	Good	73.3		

2014 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	60.6	12.5	0.6	30.9	7.7	2.63	0.30	37 19	MIXED	47--26--14--13--03	
Overland	60.6	12.5	0.6	30.3	9.4	2.60	0.37	62 16	HARD	02--13--27--58--01	
Wesley	58.9	12.1	0.6	32.2	9.0	2.73	0.37	54 16	HARD	07--24--35--34--02	
Jagalene	60.0	11.9	0.5	30.8	9.5	2.70	0.37	66 16	HARD	02--08--23--67--01	
Jerry	59.6	12.3	0.6	32.4	10.2	2.63	0.37	53 17	MIXED	13--22--28--37--03	
NX04Y2107W	59.0	12.0	0.6	34.0	10.0	2.77	0.35	55 15	HARD	06--20--35--39--02	
NX11MD2337	57.0	12.4	0.6	30.1	9.6	2.62	0.37	70 16	HARD	02--06--16--76--01	
N11MD2129W	60.2	12.0	0.6	27.0	8.0	2.49	0.32	70 18	HARD	04--05--15--76--01	
N11MD2157W	59.9	12.2	0.6	27.9	8.0	2.56	0.34	54 16	HARD	09--22--28--41--02	
N11MD2166W	58.6	12.2	0.6	28.7	8.8	2.50	0.34	56 16	HARD	07--20--31--42--02	
N11MD2172	57.8	12.2	0.6	27.7	9.2	2.51	0.35	66 19	HARD	05--10--21--64--01	
LCH11-147	59.9	11.8	0.5	29.8	8.4	2.57	0.35	48 17	MIXED	17--28--29--26--03	
LCH10-187	60.4	12.3	0.5	29.3	9.7	2.56	0.38	63 16	HARD	04--10--27--59--01	
LCH11-1064	60.0	12.1	0.5	31.5	9.3	2.63	0.37	67 15	HARD	02--08--19--71--01	
LCH09-06	59.0	12.3	0.6	31.6	8.4	2.66	0.35	57 15	HARD	05--18--33--44--01	
LCH13NEDH-14-53	59.2	12.7	0.6	30.9	10.7	2.66	0.40	61 18	HARD	04--16--25--55--01	
NE10507	58.7	12.3	0.5	28.8	8.7	2.56	0.36	60 17	HARD	05--14--32--49--01	
NE10589	60.0	12.4	0.5	29.2	7.8	2.65	0.33	62 14	HARD	03--10--27--60--01	
NHH11569	61.0	12.2	0.5	27.7	8.1	2.58	0.33	59 16	HARD	05--17--27--51--01	
NI09710H	56.0	12.4	0.5	31.7	9.1	2.67	0.37	55 15	HARD	06--20--32--42--02	
NW09627	58.9	12.5	0.5	29.7	8.7	2.62	0.34	50 17	MIXED	15--27--27--31--03	
NI10718W	59.6	12.4	0.5	30.6	9.3	2.62	0.37	58 16	HARD	05--18--34--43--01	
NE10683	57.5	12.6	0.5	32.8	9.1	2.65	0.36	44 16	MIXED	22--33--27--18--03	
W434 = Flourish	57.8	12.3	0.5	30.3	9.7	2.58	0.37	53 18	MIXED	11--24--29--36--03	
W454 = Emerson	60.9	12.2	0.5	25.2	7.1	2.42	0.30	57 16	HARD	05--19--34--42--01	
NH11490	59.9	12.2	0.5	30.4	9.2	2.59	0.35	68 17	HARD	04--06--19--71--01	
HV9W06-505	61.9	11.9	0.5	31.3	8.7	2.76	0.35	69 16	HARD	02--05--19--74--01	
FA9W10-6012R	61.1	12.0	0.5	30.6	8.8	2.67	0.37	68 14	HARD	00--05--21--74--01	
MT1078	54.8	12.5	0.6	27.6	8.2	2.45	0.32	67 18	HARD	04--09--16--71--01	
MT1090	55.4	12.5	0.5	28.4	10.0	2.55	0.38	65 16	HARD	02--08--26--64--01	
SD08080	59.9	12.3	0.6	31.8	8.4	2.64	0.34	53 15	HARD	10--21--29--40--02	
SD08200	60.1	12.7	0.5	33.8	9.1	2.72	0.33	61 15	HARD	03--12--31--54--01	
SD09113	57.9	12.9	0.5	27.4	8.9	2.56	0.35	66 17	HARD	04--07--18--71--01	
SD09118	58.8	12.6	0.5	27.8	9.2	2.52	0.34	65 16	HARD	03--08--22--67--01	
SD09138	60.2	12.8	0.4	29.2	9.2	2.63	0.35	68 17	HARD	03--09--15--73--01	
SD09192	59.7	12.8	0.5	31.9	10.6	2.66	0.40	62 18	HARD	05--12--23--60--01	
SD09227	59.8	12.5	0.5	26.6	8.3	2.53	0.33	70 18	HARD	03--06--15--76--01	
SD10257-2	60.7	12.4	0.5	33.8	9.9	2.75	0.37	65 14	HARD	00--07--27--66--01	
SD10W153	59.8	12.2	0.5	32.0	9.6	2.69	0.37	57 16	HARD	06--14--40--40--02	
SD110060-9	59.4	12.6	0.5	28.9	9.2	2.56	0.37	66 18	HARD	04--09--21--66--01	

2014 NRPN Intraregional Production Zone

North Central Plains

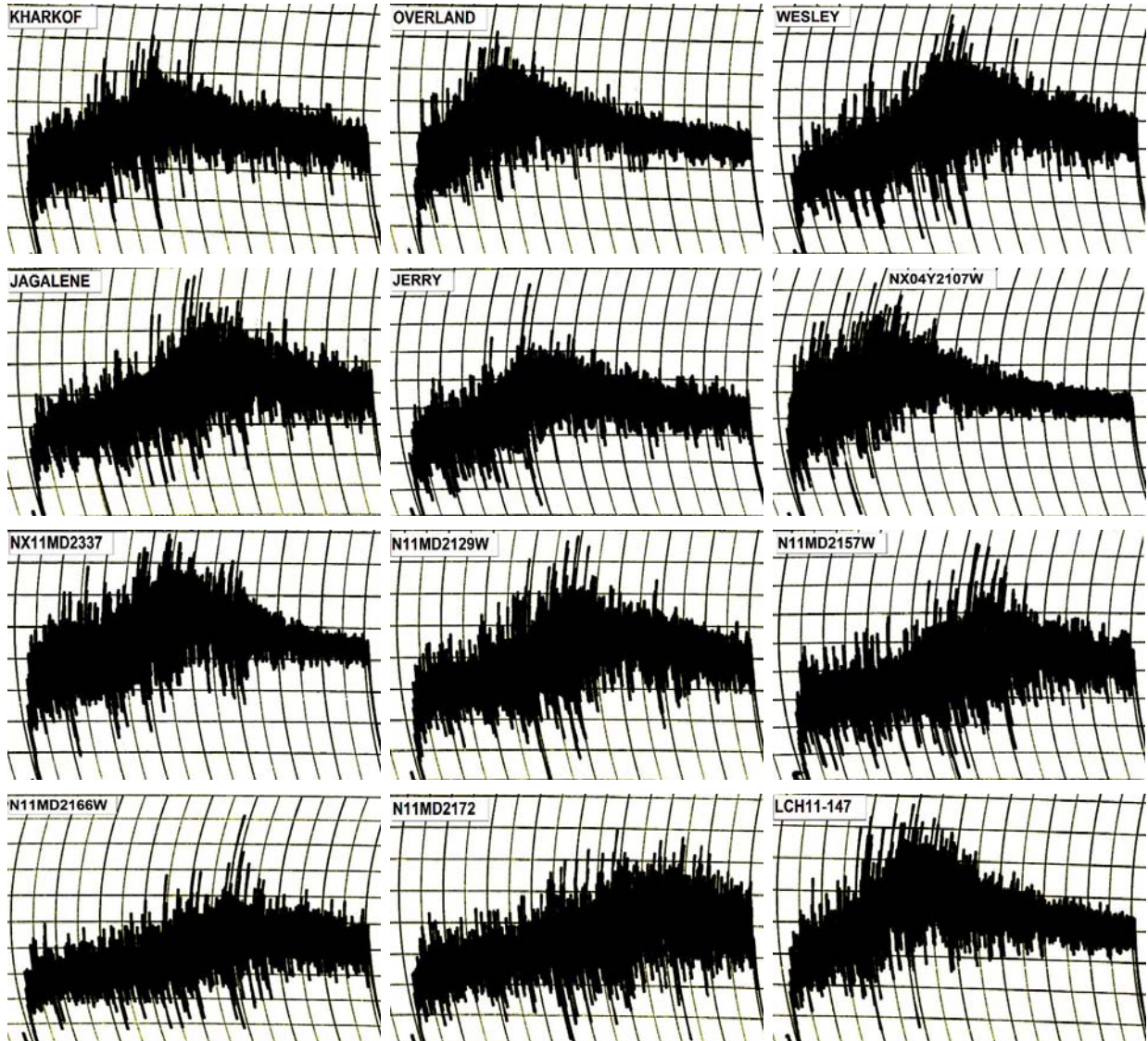
LINE	Wheat		Flour			Noodle Color					
	Protein	Milling Yield	Ash	Protein	PPO	L @ 0	a @ 0	b @ 0	Delta L 24 hrs	Delta a 24 hrs	Delta b 24 hrs
	(%)	(%)	(%)	(%)							
Kharkof	14.9	66.2	0.48	13.5	0.532	79.74	-2.57	21.09	-11.94	1.22	2.78
Overland	13.4	68.4	0.43	11.9	0.550	79.75	-2.62	21.77	-9.47	0.91	1.80
Wesley	14.4	70.1	0.43	13.3	0.626	80.30	-2.70	20.72	-11.04	1.13	1.85
Jagalene	13.6	68.5	0.49	12.2	0.528	79.90	-2.66	22.92	-12.39	1.55	1.63
Jerry	13.4	69.4	0.44	12.4	0.585	80.24	-2.92	24.81	-9.01	0.89	0.35
NX04Y2107W	13.8	59.4	0.42	12.4	0.587	80.99	-2.08	19.68	-18.70	2.27	3.44
NX11MD2337	13.9	62.7	0.49	12.6	0.674	80.53	-2.56	21.70	-15.71	1.73	2.06
N11MD2129W	13.0	67.2	0.54	12.1	0.640	80.62	-2.54	19.87	-11.99	1.55	2.43
N11MD2157W	13.2	68.3	0.42	11.8	0.532	81.87	-2.86	22.13	-10.61	0.94	1.67
N11MD2166W	13.1	66.8	0.40	11.6	0.579	83.85	-2.37	17.47	-13.15	0.98	6.00
N11MD2172	13.2	67.6	0.49	11.7	0.542	80.70	-2.73	21.52	-12.16	1.30	4.05
LCH11-147	14.0	67.7	0.43	12.6	0.623	80.61	-2.86	21.84	-10.97	1.21	1.94
LCH10-187	13.5	67.0	0.45	12.0	0.602	79.29	-1.35	22.26	-11.03	1.00	2.81
LCH11-1064	13.6	66.9	0.50	12.2	0.577	78.31	-1.32	23.99	-10.36	1.07	1.48
LCH09-06	13.8	70.0	0.43	12.6	0.576	79.57	-1.64	23.20	-10.11	1.19	0.67
LCH13NEDH-14-53	13.0	70.9	0.54	11.7	0.579	80.61	-1.83	22.69	-13.27	1.97	1.50
NE10507	12.6	68.8	0.45	11.5	0.670	80.62	-1.56	21.25	-13.34	1.33	3.83
NE10589	12.8	68.4	0.50	11.7	0.591	81.47	-1.48	20.06	-12.41	1.53	3.78
NHH11569	13.7	70.0	0.45	12.3	0.683	82.09	-2.06	20.96	-13.22	1.11	4.64
NI09710H	13.4	71.0	0.45	11.9	0.597	77.89	-1.66	25.18	-11.02	1.81	0.73
NW09627	12.4	71.1	0.50	11.4	0.256	83.09	-2.56	22.41	-10.69	0.80	4.86
NI10718W	12.6	72.5	0.48	11.3	0.536	82.16	-2.18	21.55	-11.69	0.99	4.37
NE10683	12.3	71.2	0.46	11.0	0.652	79.55	-1.83	22.50	-11.73	1.51	1.89
W434 = Flourish	13.4	72.1	0.50	12.3	0.554	79.68	-1.90	22.44	-12.47	1.60	2.31
W454 = Emerson	13.9	72.0	0.39	12.8	0.640	80.60	-1.80	22.63	-9.68	1.21	0.94
NH11490	14.3	68.4	0.45	13.2	0.592	80.00	-1.99	24.02	-12.78	1.52	1.09
HV9W06-505	13.9	69.2	0.46	12.7	0.457	78.82	-1.66	23.32	-10.40	1.62	0.99
FA9W10-6012R	14.3	68.9	0.54	13.1	0.521	79.12	-1.89	24.82	-10.82	1.32	0.03
MT1078	13.8	68.7	0.52	12.8	0.701	78.72	-1.62	23.07	-13.77	1.93	1.46
MT1090	13.2	68.5	0.51	12.2	0.592	78.73	-1.71	25.37	-11.08	1.75	-0.09
SD08080	13.6	72.1	0.46	12.4	0.608	79.49	-1.15	20.76	-10.72	1.19	1.54
SD08200	13.4	70.4	0.44	11.9	0.578	81.24	-1.56	20.07	-13.67	1.63	3.50
SD09113	13.2	69.2	0.48	11.8	0.604	78.76	-2.00	25.40	-11.01	1.67	0.62
SD09118	13.2	69.1	0.46	11.8	0.578	79.35	-2.17	25.65	-9.11	1.32	-0.13
SD09138	13.4	69.1	0.49	12.1	0.532	80.09	-1.97	24.17	-11.30	1.29	0.03
SD09192	13.6	67.8	0.52	12.0	0.585	80.16	-1.93	23.29	-11.26	1.45	0.97
SD09227	13.1	68.7	0.47	11.8	0.576	76.68	-2.31	22.97	-9.77	1.78	0.77
SD10257-2	13.2	69.9	0.45	11.8	0.476	78.89	-1.96	22.49	-10.94	1.86	1.44
SD10W153	13.1	68.1	0.42	11.5	0.639	78.90	-1.55	23.20	-11.26	1.22	1.32
SD110060-9	13.2	68.1	0.44	11.9	0.537	79.76	-2.07	22.86	-11.41	1.46	0.73

2014 NRPN Intraregional Production Zone

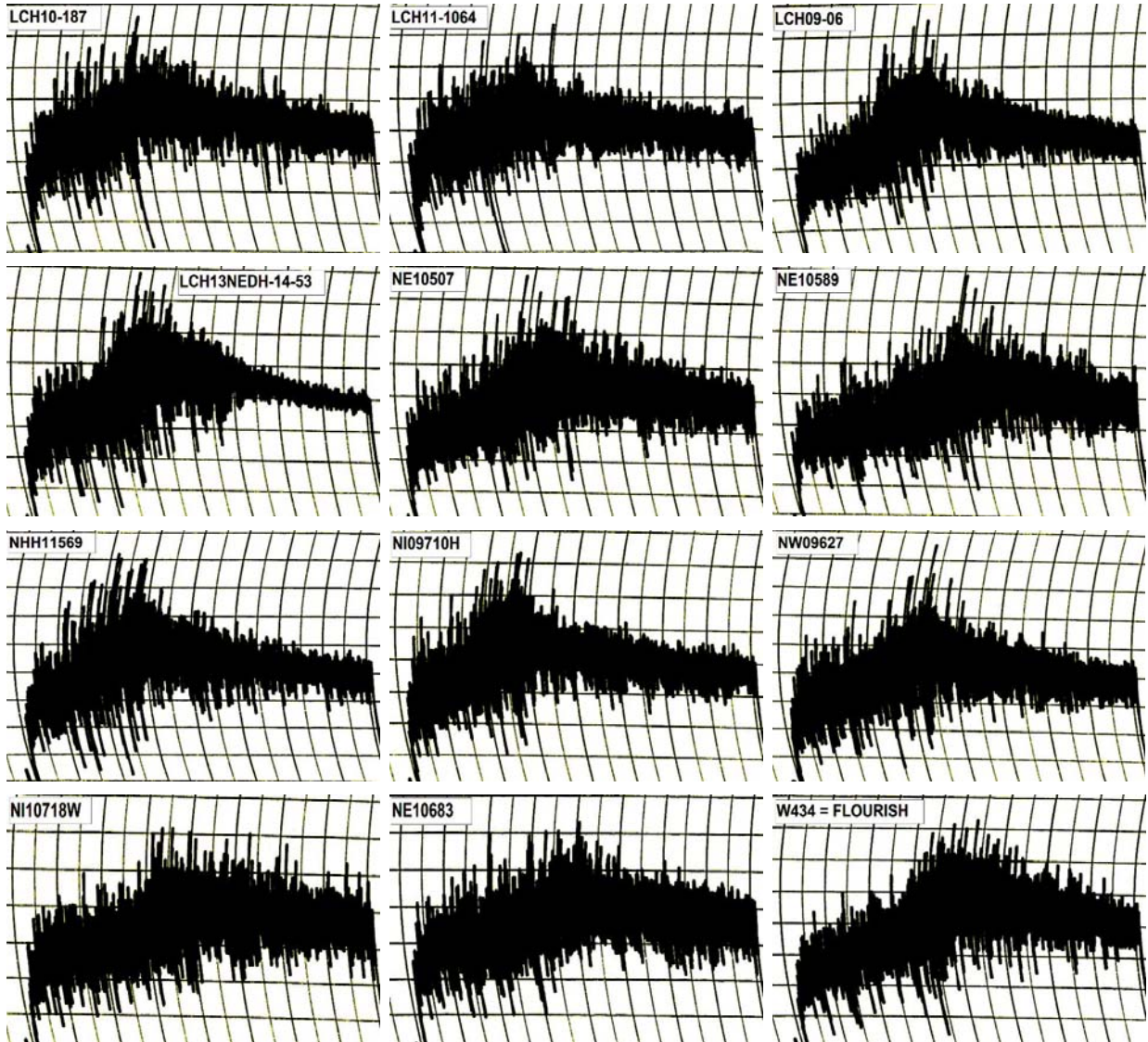
North Central Plains

	Flour Protein	Mixograph			
		Absorption	As-Is	Corrected	Tolerance
Line	(%)	(%)	(min)	(min)	
Kharkof	13.5	62.9	3.25	3.25	2
Overland	11.9	62.8	2.25	2.22	1
Wesley	13.3	64.1	3.88	3.88	3
Jagalene	12.2	63.3	4.38	4.38	4
Jerry	12.4	62.7	3.25	3.25	2
NX04Y2107W	12.4	66.1	2.38	2.38	1
NX11MD2337	12.6	67.4	3.63	3.63	0
N11MD2129W	12.1	63.6	4.00	4.00	3
N11MD2157W	11.8	60.7	4.63	4.54	2
N11MD2166W	11.6	61.3	4.88	4.63	4
N11MD2172	11.7	62.5	5.88	5.69	5
LCH11-147	12.6	64.0	3.13	3.13	1
LCH10-187	12.0	63.0	3.13	3.13	2
LCH11-1064	12.2	63.3	2.88	2.88	2
LCH09-06	12.6	63.0	3.25	3.25	1
LCH13NEDH-14-53	11.7	61.4	3.00	2.89	0
NE10507	11.5	62.1	3.50	3.28	3
NE10589	11.7	62.5	4.13	3.99	3
NHH11569	12.3	62.4	2.88	2.88	1
NI09710H	11.9	62.8	2.63	2.61	1
NW09627	11.4	61.9	3.38	3.13	2
NI10718W	11.3	60.7	3.75	3.42	3
NE10683	11.0	61.3	3.88	3.41	3
W434 = Flourish	12.3	65.0	4.00	4.00	4
W454 = Emerson	12.8	61.3	5.38	5.38	5
NH11490	13.2	64.9	3.38	3.38	2
HV9W06-505	12.7	63.0	2.75	2.75	1
FA9W10-6012R	13.1	64.8	3.25	3.25	2
MT1078	12.8	64.3	4.63	4.63	5
MT1090	12.2	63.3	7.00	7.00	5
SD08080	12.4	63.5	3.50	3.50	4
SD08200	11.9	62.9	4.50	4.47	4
SD09113	11.8	61.1	3.00	2.93	2
SD09118	11.8	61.6	3.50	3.42	3
SD09138	12.1	62.1	3.75	3.75	1
SD09192	12.0	62.9	4.50	4.50	4
SD09227	11.8	62.5	3.00	2.91	2
SD10257-2	11.8	62.7	1.88	1.84	0
SD10W153	11.5	62.0	3.38	3.16	3
SD110060-9	11.9	61.7	4.50	4.45	4

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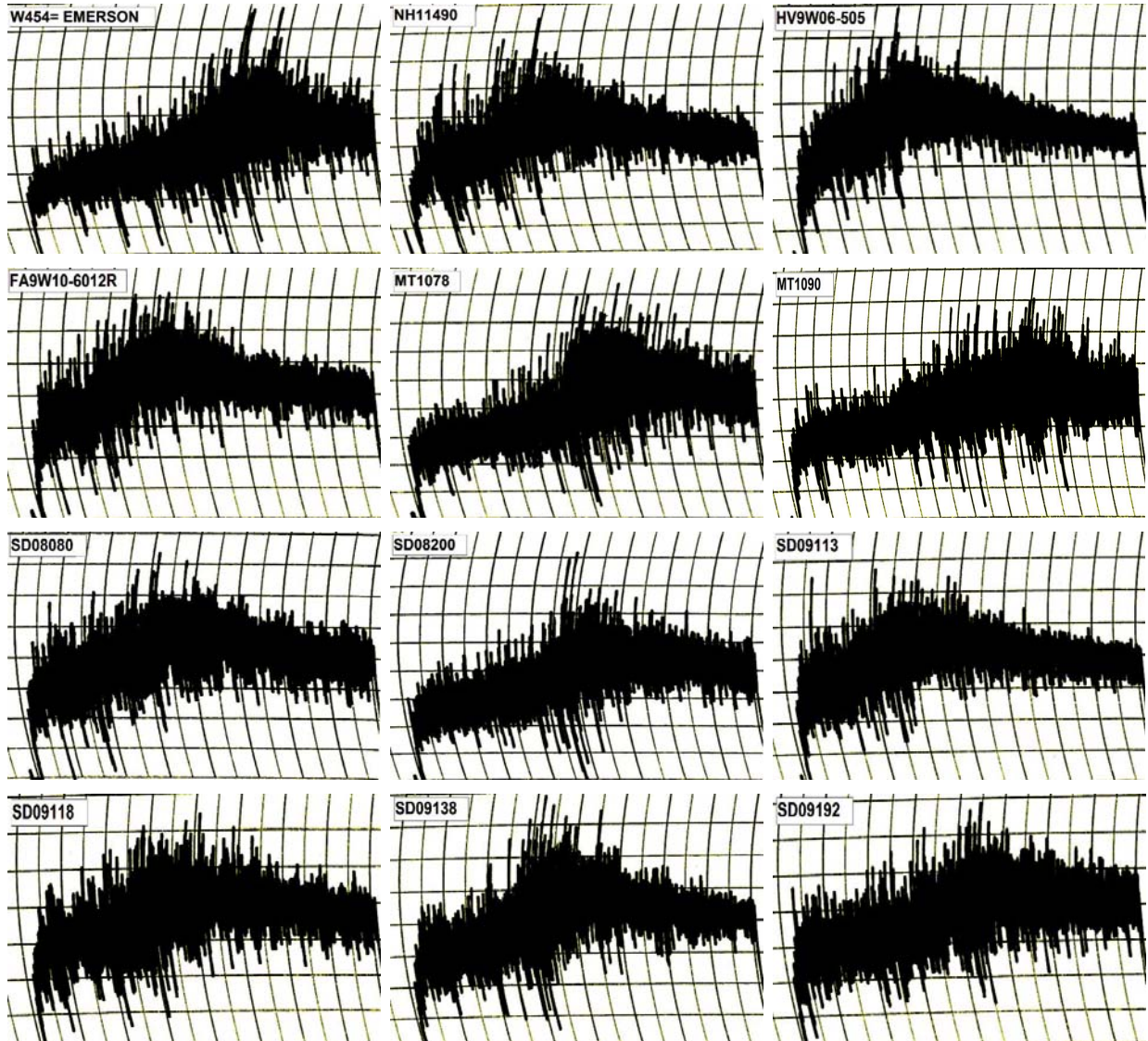


2014 NRPN Intraregional Production Zone North Central Plains

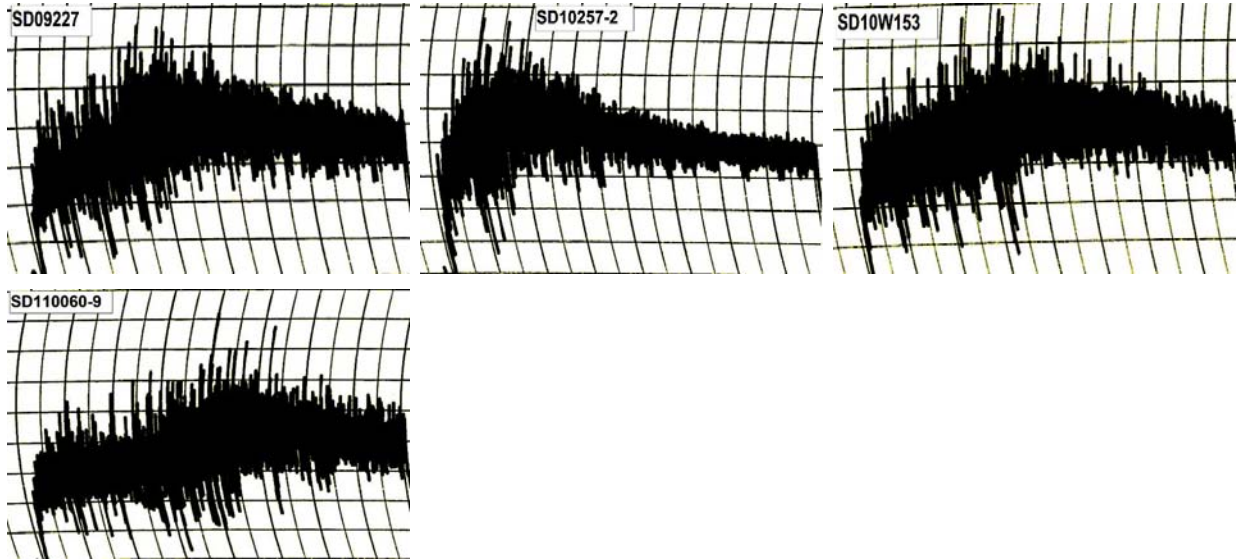


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Line	RVA						
	Stirring Number (RVU)	Peak Viscosity (RVU)	Trough Viscosity (RVU)	Breakdown (RVU)	Final Viscosity (RVU)	Set back (RVU)	Peak Time (min)
Kharkof	142.67	246.33	162.33	84.00	288.58	126.25	6.33
Overland	134.58	240.42	154.00	86.42	285.75	131.75	6.27
Wesley	116.33	235.08	145.83	89.25	284.42	138.58	6.13
Jagalene	120.25	246.92	154.17	92.75	293.33	139.17	6.20
Jerry	128.08	230.58	152.67	77.92	296.00	143.33	6.13
NX04Y2107W	78.67	112.92	17.33	95.58	25.50	8.17	3.40
NX11MD2337	93.33	125.42	32.00	93.42	44.42	12.42	3.60
N11MD2129W	119.17	268.75	148.42	120.33	269.92	121.50	6.13
N11MD2157W	126.08	251.08	159.75	91.33	300.58	140.83	6.20
N11MD2166W	118.08	250.67	155.83	94.83	295.17	139.33	6.20
N11MD2172	107.83	278.58	158.33	120.25	298.33	140.00	6.13
LCH11-147	128.17	255.33	163.50	91.83	300.42	136.92	6.27
LCH10-187	116.17	242.25	146.83	95.42	267.67	120.83	6.27
LCH11-1064	112.58	255.17	156.67	98.50	282.17	125.50	6.33
LCH09-06	119.50	243.50	150.33	93.17	278.67	128.33	6.13
LCH13NEDH-14-53	105.83	220.75	110.75	110.00	216.17	105.42	6.07
NE10507	126.92	281.92	148.75	133.17	277.42	128.67	6.27
NE10589	126.58	238.42	155.75	82.67	291.42	135.67	6.27
NHH11569	130.75	249.42	168.00	81.42	305.92	137.92	6.20
NI09710H	123.00	226.50	137.08	89.42	268.83	131.75	6.07
NW09627	104.50	246.17	145.92	100.25	276.67	130.75	6.13
NI10718W	113.92	230.67	144.42	86.25	273.67	129.25	6.13
NE10683	132.92	265.75	158.92	106.83	290.25	131.33	6.27
W434 = Flourish	131.25	255.50	154.33	101.17	284.42	130.08	6.27
W454 = Emerson	105.08	232.92	133.58	99.33	251.17	117.58	6.07
NH11490	123.08	228.33	147.17	81.17	276.83	129.67	6.20
HV9W06-505	126.17	255.33	157.25	98.08	289.08	131.83	6.20
FA9W10-6012R	150.75	251.92	172.08	79.83	299.08	127.00	6.40
MT1078	120.67	248.42	153.75	94.67	294.08	140.33	6.13
MT1090	127.50	260.58	157.33	103.25	305.33	148.00	6.20
SD08080	134.67	242.33	160.42	81.92	288.83	128.42	6.33
SD08200	121.67	215.17	138.58	76.58	270.08	131.50	6.13
SD09113	117.08	255.08	156.00	99.08	288.92	132.92	6.13
SD09118	106.75	246.25	159.42	86.83	300.58	141.17	6.20
SD09138	117.25	236.75	147.00	89.75	282.50	135.50	6.13
SD09192	129.00	259.67	163.33	96.33	302.25	138.92	6.27
SD09227	141.67	251.58	167.58	84.00	306.92	139.33	6.33
SD10257-2	125.42	243.83	163.50	80.33	305.08	141.58	6.20
SD10W153	106.83	249.83	142.75	107.08	253.58	110.83	6.27
SD110060-9	126.83	246.33	154.25	92.08	281.17	126.92	6.27

2014 NRPN Intraregional Production Zone

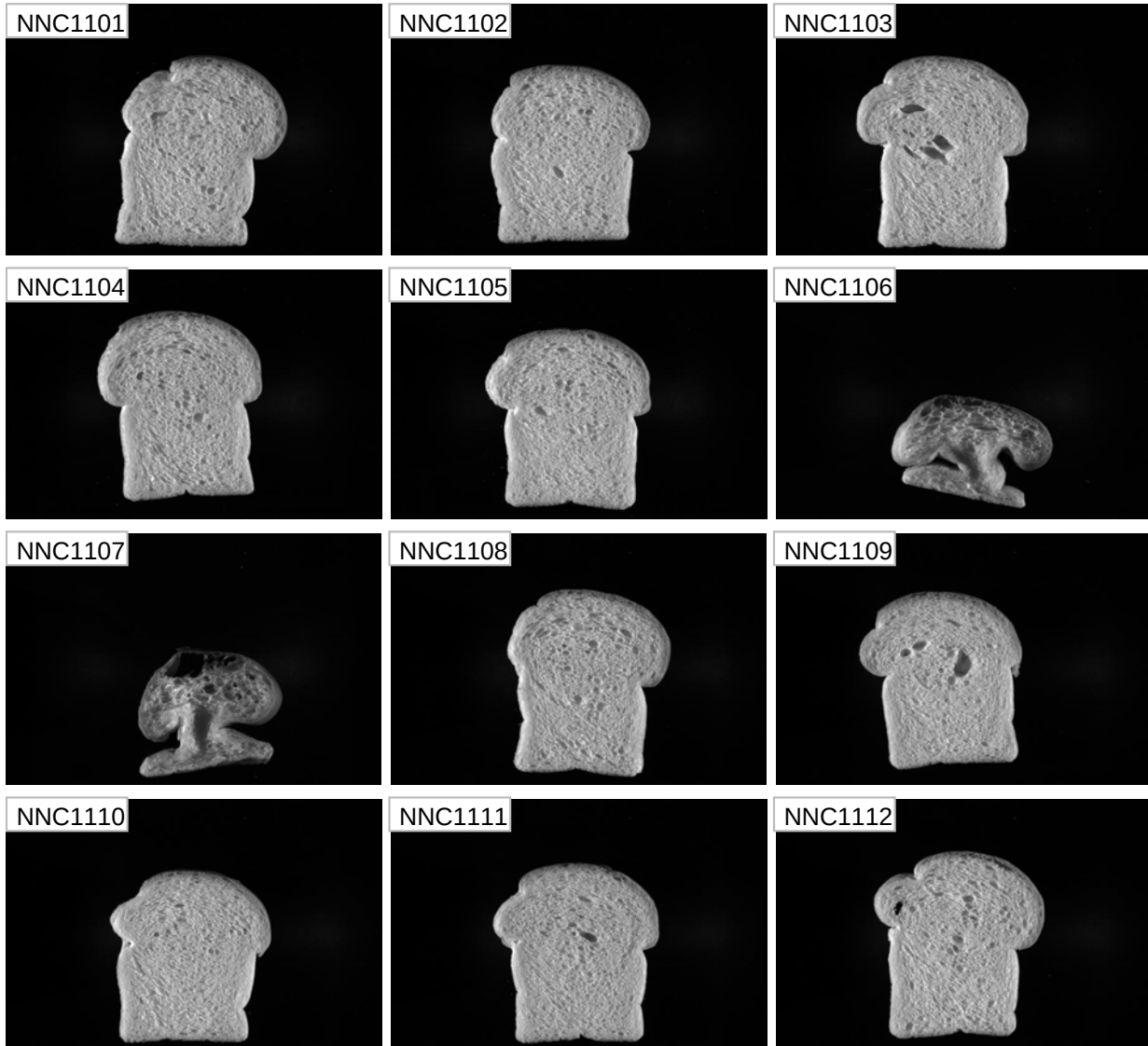
North Central Plains

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	13.5	61.3	4.25	4.25	171.3	8.0	4.5	1040	7.0	70
Overland	11.9	61.0	3.00	2.97	170.9	7.7	4.0	885	5.9	66
Wesley	13.3	64.8	6.50	6.50	174.1	7.9	6.0	1035	6.9	71
Jagalene	12.2	63.2	6.00	6.00	173.0	7.9	5.5	985	6.6	74
Jerry	12.4	62.3	4.75	4.75	173.1	7.9	4.0	915	6.1	65
NX04Y2107W	12.4	64.6	4.50	4.50	174.3	7.8	0.0	970	6.4	72
NX11MD2337	12.6	66.4	4.13	4.13	176.6	7.8	0.0	1055	7.0	79
N11MD2129W	12.1	63.8	5.88	5.88	173.2	7.8	5.0	960	6.4	72
N11MD2157W	11.8	62.2	6.75	6.61	171.8	7.6	4.0	885	6.0	66
N11MD2166W	11.6	60.8	5.63	5.34	170.6	7.5	4.0	890	6.0	69
N11MD2172	11.7	62.5	9.00	8.72	171.3	7.5	4.0	910	6.1	70
LCH11-147	12.6	63.9	3.50	3.50	171.1	7.7	4.0	975	6.6	70
LCH10-187	12.0	63.5	3.13	3.13	173.6	7.4	2.8	930	6.2	70
LCH11-1064	12.2	63.5	3.25	3.25	173.7	7.4	2.5	925	6.2	68
LCH09-06	12.6	63.0	3.75	3.75	172.8	7.7	4.5	935	6.3	66
LCH13NEDH-14-53	11.7	61.4	4.25	4.10	171.7	7.3	3.8	870	5.8	65
NE10507	11.5	62.3	5.00	4.69	172.4	7.6	5.5	960	6.4	78
NE10589	11.7	63.2	5.50	5.31	172.8	7.5	4.0	880	5.8	67
NHH11569	12.3	63.5	3.50	3.50	173.6	7.8	4.0	945	6.3	70
NI09710H	11.9	60.3	2.88	2.85	170.5	7.4	2.0	870	5.9	64
NW09627	11.4	61.7	4.50	4.16	171.5	7.6	6.0	915	6.1	73
NI10718W	11.3	61.7	6.25	5.70	171.3	7.4	4.5	915	6.2	74
NE10683	11.0	61.4	4.38	3.85	170.1	7.3	4.0	855	5.7	69
W434 = Flourish	12.3	64.2	5.75	5.75	174.0	7.6	5.0	985	6.6	73
W454 = Emerson	12.8	61.3	8.00	8.00	170.6	7.3	5.0	990	6.7	70
NH11490	13.2	64.2	3.75	3.75	174.0	7.6	4.0	960	6.3	65
HV9W06-505	12.7	63.0	3.25	3.25	172.4	7.2	3.0	890	5.9	61
FA9W10-6012R	13.1	63.5	4.00	4.00	173.2	7.7	5.0	1045	7.0	74
MT1078	12.8	64.3	7.00	7.00	173.4	7.5	4.5	975	6.6	69
MT1090	12.2	63.3	8.63	8.63	172.1	7.5	5.0	920	6.3	67
SD08080	12.4	63.4	3.88	3.88	173.0	7.5	4.0	935	6.3	68
SD08200	11.9	63.4	7.38	7.33	172.6	7.4	4.0	910	6.2	68
SD09113	11.8	60.9	4.00	3.90	170.3	7.3	3.5	885	6.0	66
SD09118	11.8	62.0	4.38	4.28	171.6	7.1	3.5	860	5.8	64
SD09138	12.1	63.4	4.88	4.88	173.2	7.7	4.0	940	6.2	70
SD09192	12.0	63.2	6.00	6.00	172.6	7.5	4.0	945	6.3	72
SD09227	11.8	62.7	3.63	3.53	169.7	7.8	3.0	890	6.1	67
SD10257-2	11.8	61.0	2.75	2.70	171.4	7.3	2.0	835	5.5	61
SD10W153	11.5	62.0	4.00	3.74	171.5	7.2	3.5	850	5.7	65
SD110060-9	11.9	63.1	6.00	5.94	172.5	7.5	4.0	900	6.0	67

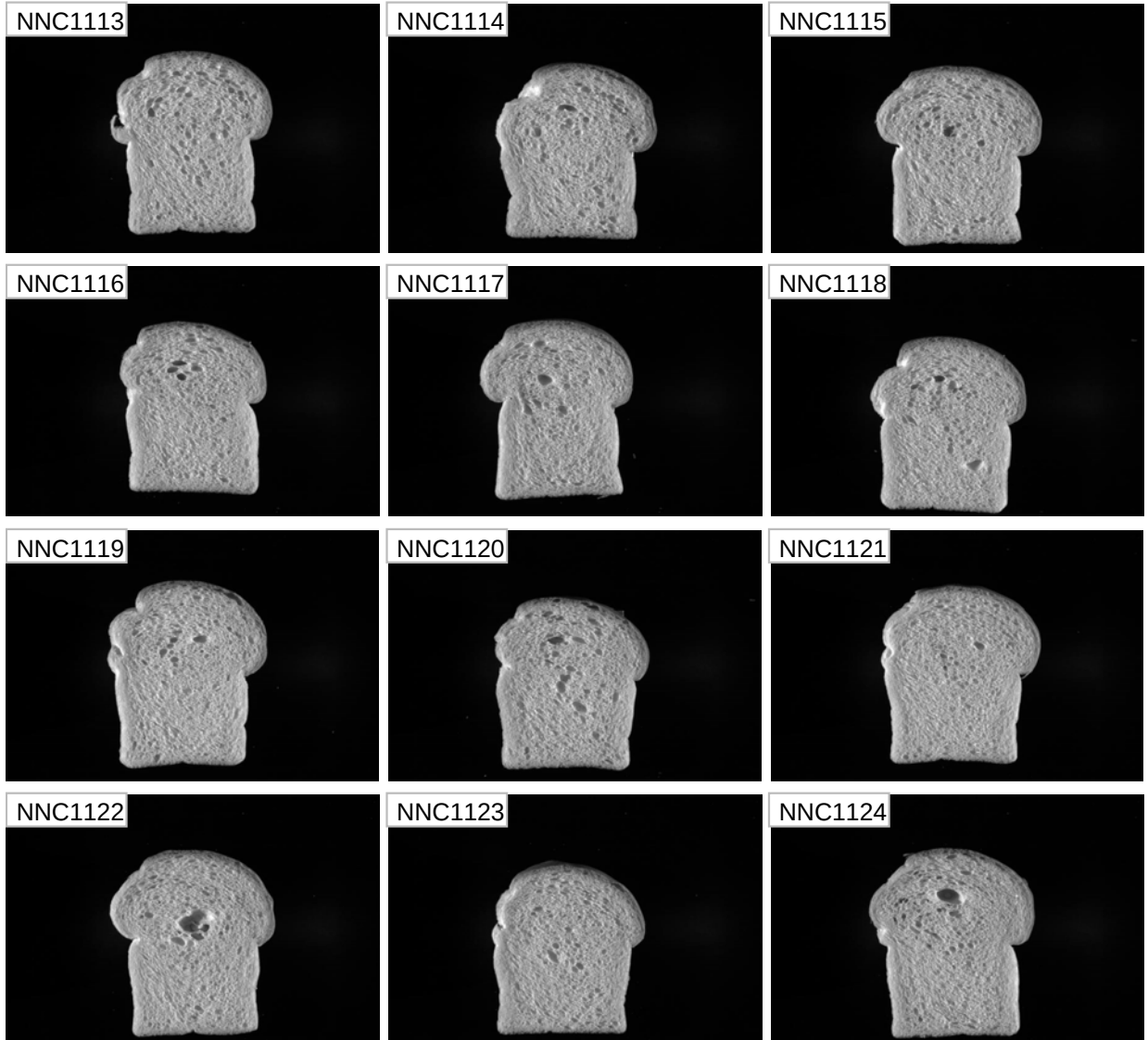
LIST of NRPN SAMPLE ID For C-CELL IMAGES

Entry	Breeder ID	HWWQL ID		
		North Central Plains	Northern High Plains	Northern Plains
1	Kharkof	14-NNC1101	14-NNH1101	14-NNP1101
2	Overland	14-NNC1102	14-NNH1102	14-NNP1102
3	Wesley	14-NNC1103	14-NNH1103	14-NNP1103
4	Jagalene	14-NNC1104	14-NNH1104	14-NNP1104
5	Jerry	14-NNC1105	14-NNH1105	14-NNP1105
6	NX04Y2107W	14-NNC1106	14-NNH1106	14-NNP1106
7	NX11MD2337	14-NNC1107	14-NNH1107	14-NNP1107
8	N11MD2129W	14-NNC1108	14-NNH1108	14-NNP1108
9	N11MD2157W	14-NNC1109	14-NNH1109	14-NNP1109
10	N11MD2166W	14-NNC1110	14-NNH1110	14-NNP1110
11	N11MD2172	14-NNC1111	14-NNH1111	14-NNP1111
12	LCH11-147	14-NNC1112	14-NNH1112	14-NNP1112
13	LCH10-187	14-NNC1113	14-NNH1113	14-NNP1113
14	LCH11-1064	14-NNC1114	14-NNH1114	14-NNP1114
15	LCH09-06	14-NNC1115	14-NNH1115	14-NNP1115
16	LCH13NEDH-14-53	14-NNC1116	14-NNH1116	14-NNP1116
17	NE10507	14-NNC1117	14-NNH1117	14-NNP1117
18	NE10589	14-NNC1118	14-NNH1118	14-NNP1118
19	NHH11569	14-NNC1119	14-NNH1119	14-NNP1119
20	NI09710H	14-NNC1120	14-NNH1120	14-NNP1120
21	NW09627	14-NNC1121	14-NNH1121	14-NNP1121
22	NI10718W	14-NNC1122	14-NNH1122	14-NNP1122
23	NE10683	14-NNC1123	14-NNH1123	14-NNP1123
24	W434 = Flourish	14-NNC1124	14-NNH1124	14-NNP1124
25	W454 = Emerson	14-NNC1125	14-NNH1125	14-NNP1125
26	NH11490	14-NNC1126	14-NNH1126	14-NNP1126
27	HV9W06-505	14-NNC1127	14-NNH1127	14-NNP1127
28	FA9W10-6012R	14-NNC1128	14-NNH1128	14-NNP1128
29	MT1078	14-NNC1129	14-NNH1129	14-NNP1129
30	MT1090	14-NNC1130	14-NNH1130	14-NNP1130
31	SD08080	14-NNC1131	14-NNH1131	14-NNP1131
32	SD08200	14-NNC1132	14-NNH1132	14-NNP1132
33	SD09113	14-NNC1133	14-NNH1133	14-NNP1133
34	SD09118	14-NNC1134	14-NNH1134	14-NNP1134
35	SD09138	14-NNC1135	14-NNH1135	14-NNP1135
36	SD09192	14-NNC1136	14-NNH1136	14-NNP1136
37	SD09227	14-NNC1137	14-NNH1137	14-NNP1137
38	SD10257-2	14-NNC1138	14-NNH1138	14-NNP1138
39	SD10W153	14-NNC1139	14-NNH1139	14-NNP1139
40	SD110060-9	14-NNC1140	14-NNH1140	14-NNP1140

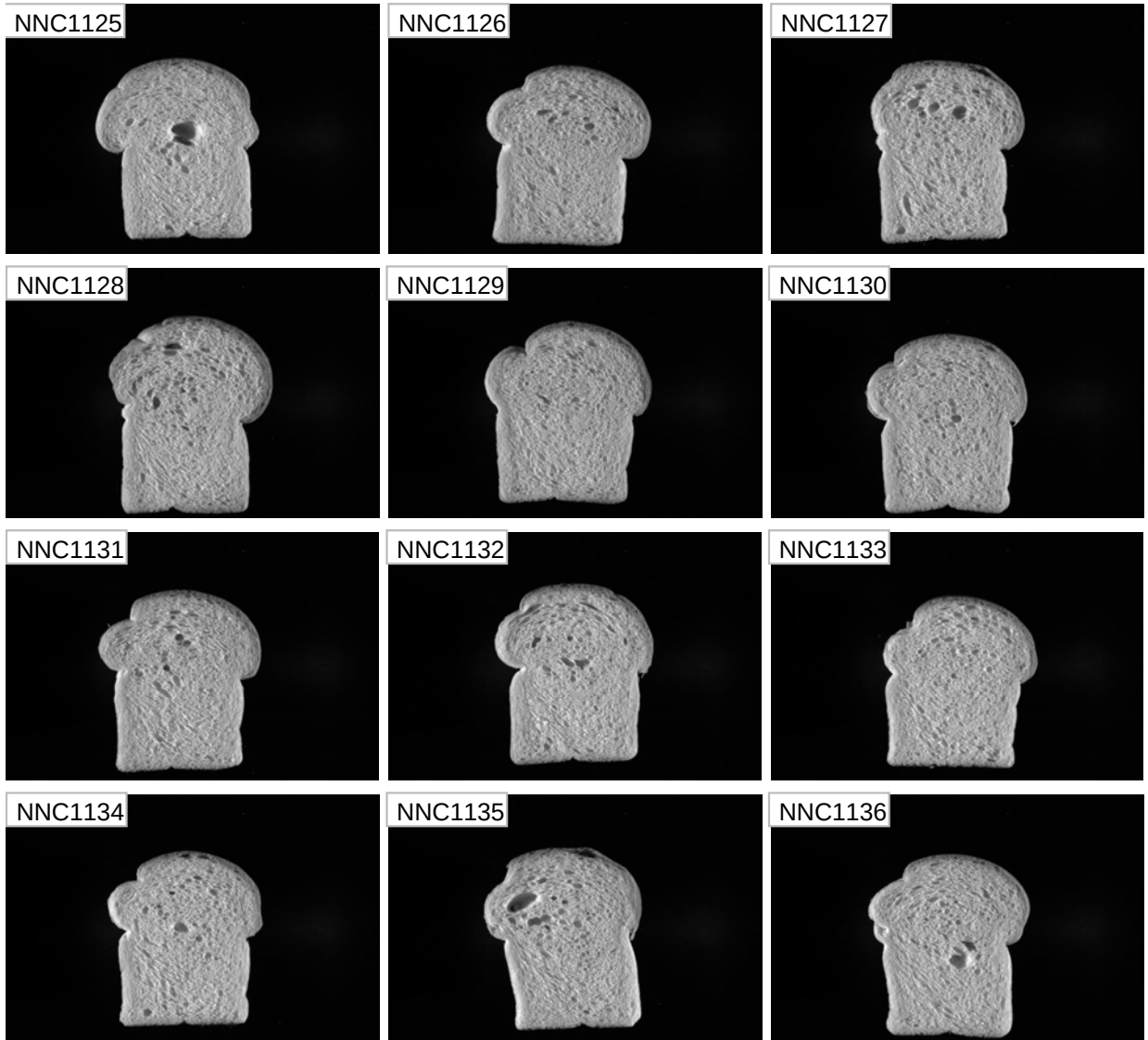
2014 NRPN Intraregional Production Zone North Central Plains



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Hard Winter Wheat Quality Report 2014 NRPN-NHP

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

ID	Milling Score	Rating	%	Baking Score	Rating	%	1RS	Trait Deficiencies
Kharkof	51.7	Very Poor	81.7	58.9	Very Good	94.6		6,20,
Overland	56.3	Poor	89.0	25.6	Very Poor	41.2		12,16,17,
Wesley	60.0	Good	94.8	39.8	Poor	64.0		
Jagalene	63.3	Very Good	100.0	43.7	Average	70.3		
Jerry	57.7	Average	91.2	56.5	Very Good	90.8		
NX04Y2107W	41.7	Very Poor	65.9	41.7	Average	67.0		8,10,16,21,
NX11MD2337	43.4	Very Poor	68.5	43.9	Average	70.6		1,8,16,21,
N11MD2129W	60.0	Good	94.8	53.8	Good	86.5		16,
N11MD2157W	61.0	Very Good	96.3	50.5	Good	81.2		
N11MD2166W	57.9	Average	91.4	33.9	Very Poor	54.4		18,19,
N11MD2172	54.3	Very Poor	85.7	34.8	Poor	56.0		14,15,
LCH11-147	56.1	Poor	88.6	35.6	Poor	57.2		16,
LCH10-187	52.2	Very Poor	82.4	38.8	Average	62.3		16,21,
LCH11-1064	54.5	Very Poor	86.2	43.1	Average	69.3		16,
LCH09-06	59.5	Good	94.1	56.4	Very Good	90.7		16,
LCH13NEDH-14-53	60.1	Good	94.9	35.3	Poor	56.8		12,13,16,
NE10507	59.0	Average	93.2	62.2	Very Good	100.0		16,
NE10589	62.4	Very Good	98.5	42.4	Average	68.1		16,
NHH11569	59.0	Good	93.3	47.7	Good	76.8		2,16,18,19,
NI09710H	61.0	Very Good	96.4	26.7	Very Poor	42.9		1,11,13,16,18,19,
NW09627	55.2	Poor	87.2	36.1	Poor	58.0		3,5,11,16,
NI10718W	61.2	Very Good	96.6	28.4	Very Poor	45.7		17,18,
NE10683	56.3	Poor	89.0	55.9	Very Good	89.9		11,
Flourish	60.3	Very Good	95.3	44.9	Average	72.3		
Emerson	59.3	Good	93.8	49.7	Good	80.0		2,4,14,15,17,
NH11490	55.5	Poor	87.6	56.8	Very Good	91.3		16,
HV9W06-505	58.5	Average	92.5	47.1	Good	75.7		16,
FA9W10-6012R	56.1	Poor	88.6	45.1	Good	72.6		9,10,16,
MT1078	54.9	Very Poor	86.7	32.8	Very Poor	52.7		1,14,15,
MT1090	58.2	Average	91.9	29.1	Very Poor	46.8		14,15,

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



Hard Winter Wheat Quality Report 2014 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				Trait	
	Score	Rating	%	Score	Rating	% 1RS	Deficiencies	
SD08080	59.0	Good	93.3	59.1	Very Good	95.0		
SD08200	61.2	Very Good	96.6	33.1	Very Poor	53.2	3,14,	
SD09113	56.1	Poor	88.7	37.3	Poor	60.0	1,2,16,	
SD09118	59.0	Average	93.3	41.8	Average	67.1		
SD09138	59.8	Good	94.5	56.4	Very Good	90.7	16,	
SD09192	57.7	Average	91.1	32.9	Very Poor	53.0 1AL	9,	
SD09227	55.6	Poor	87.8	50.7	Good	81.5	2,16,20,	
SD10257-2	60.9	Very Good	96.3	35.7	Poor	57.5	3,15,16,	
SD10W153	54.2	Very Poor	85.6	46.9	Good	75.3	5,	
SD110060-9	58.3	Average	92.1	36.3	Poor	58.4		

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LINE	Wt/Bu (lb)	SKCS Average Kernel						Hardness			
		Moisture		Weight		Diameter		SKCS	Class	Distribution	
		(%)	(sd)	(mg)	(sd)	(mm)	(sd)				
Kharkof	61.5	11.7	0.3	31.3	6.5	2.62	0.27	39	17	MIXED	39--29--21--11--03
Overland	61.2	12.0	0.4	31.9	8.9	2.61	0.35	64	17	HARD	04--10--23--63--01
Wesley	60.2	11.3	0.4	33.7	8.4	2.74	0.32	56	17	HARD	08--18--30--44--02
Jagalene	63.1	11.2	0.3	34.7	8.5	2.82	0.33	70	15	HARD	01--04--17--78--01
Jerry	60.7	11.5	0.5	33.9	8.6	2.63	0.36	55	16	HARD	10--19--30--41--02
NX04Y2107W	60.2	11.1	0.5	33.9	8.6	2.75	0.32	56	14	HARD	05--17--35--43--01
NX11MD2337	59.5	11.3	0.5	30.6	8.0	2.63	0.33	68	15	HARD	01--07--18--74--01
N11MD2129W	62.8	11.0	0.4	30.8	8.0	2.58	0.31	70	17	HARD	02--05--19--74--01
N11MD2157W	61.8	11.6	0.4	30.8	7.1	2.68	0.31	64	15	HARD	02--11--24--63--01
N11MD2166W	61.1	11.6	0.3	31.6	7.8	2.54	0.34	63	15	HARD	02--13--25--60--01
N11MD2172	60.3	11.7	0.3	30.5	8.1	2.59	0.33	69	18	HARD	02--07--18--73--01
LCH11-147	61.0	11.4	0.5	31.6	8.1	2.62	0.34	51	16	HARD	10--27--35--28--02
LCH10-187	61.0	11.4	0.5	34.9	8.1	2.77	0.31	60	17	HARD	06--14--26--54--02
LCH11-1064	61.4	11.3	0.4	36.1	8.6	2.72	0.36	69	16	HARD	00--08--19--73--01
LCH09-06	61.1	11.3	0.4	32.6	8.5	2.64	0.37	59	15	HARD	03--16--32--49--01
LCH13NEDH-14-53	62.5	11.7	0.4	33.5	8.6	2.74	0.32	67	16	HARD	02--09--21--68--01
NE10507	61.6	11.0	0.4	33.8	8.4	2.71	0.38	59	15	HARD	04--16--30--50--01
NE10589	63.0	11.5	0.4	34.0	7.8	2.80	0.37	67	14	HARD	00--06--22--72--01
NHH11569	61.5	11.5	0.4	28.4	7.8	2.57	0.31	58	18	HARD	07--17--28--48--02
NI09710H	59.7	11.6	0.4	34.9	7.7	2.74	0.33	54	17	MIXED	12--19--30--39--03
NW09627	60.9	11.8	0.4	31.6	9.6	2.68	0.39	54	17	MIXED	11--18--31--40--03
NI10718W	61.1	11.9	0.4	33.1	8.7	2.67	0.33	61	15	HARD	04--11--27--58--01
NE10683	59.9	11.9	0.5	34.3	7.4	2.71	0.37	51	17	MIXED	13--23--32--32--03
W434 = Flourish	60.9	11.6	0.4	33.4	7.8	2.67	0.34	59	16	HARD	04--16--29--51--01
W454 = Emerson	61.3	11.6	0.4	26.6	7.0	2.45	0.30	60	16	HARD	03--17--24--56--01
NH11490	61.3	11.7	0.4	32.0	8.3	2.62	0.35	65	19	HARD	06--10--19--65--02
HV9W06-505	62.3	11.3	0.6	31.8	7.7	2.75	0.32	67	15	HARD	01--10--17--72--01
FA9W10-6012R	62.0	11.0	0.4	32.4	7.1	2.72	0.30	68	16	HARD	01--06--18--75--01
MT1078	59.4	11.7	0.4	31.8	9.0	2.56	0.36	68	16	HARD	01--06--22--71--01
MT1090	60.3	12.2	0.3	32.7	8.0	2.64	0.37	67	15	HARD	02--06--22--70--01
SD08080	60.3	11.3	0.4	32.0	7.9	2.60	0.32	55	16	HARD	07--23--29--41--02
SD08200	62.0	11.4	0.4	36.8	9.4	2.78	0.37	62	15	HARD	02--11--27--60--01
SD09113	59.6	11.7	0.5	28.9	8.5	2.56	0.33	70	16	HARD	01--05--18--76--01
SD09118	61.1	11.9	0.4	31.1	9.0	2.66	0.36	68	16	HARD	01--07--20--72--01
SD09138	62.4	12.0	0.4	31.0	9.4	2.66	0.34	68	17	HARD	02--07--23--68--01
SD09192	61.1	12.1	0.5	35.1	9.2	2.70	0.36	72	14	HARD	00--04--14--82--01
SD09227	60.4	11.8	0.5	27.3	8.8	2.54	0.36	73	17	HARD	02--04--14--80--01
SD10257-2	62.0	11.9	0.3	36.1	9.4	2.81	0.36	66	17	HARD	03--07--26--64--01
SD10W153	61.8	11.4	0.4	33.7	9.3	2.76	0.39	59	17	HARD	05--20--27--48--01
SD110060-9	60.3	11.8	0.4	29.4	7.1	2.58	0.30	70	16	HARD	00--06--19--75--01

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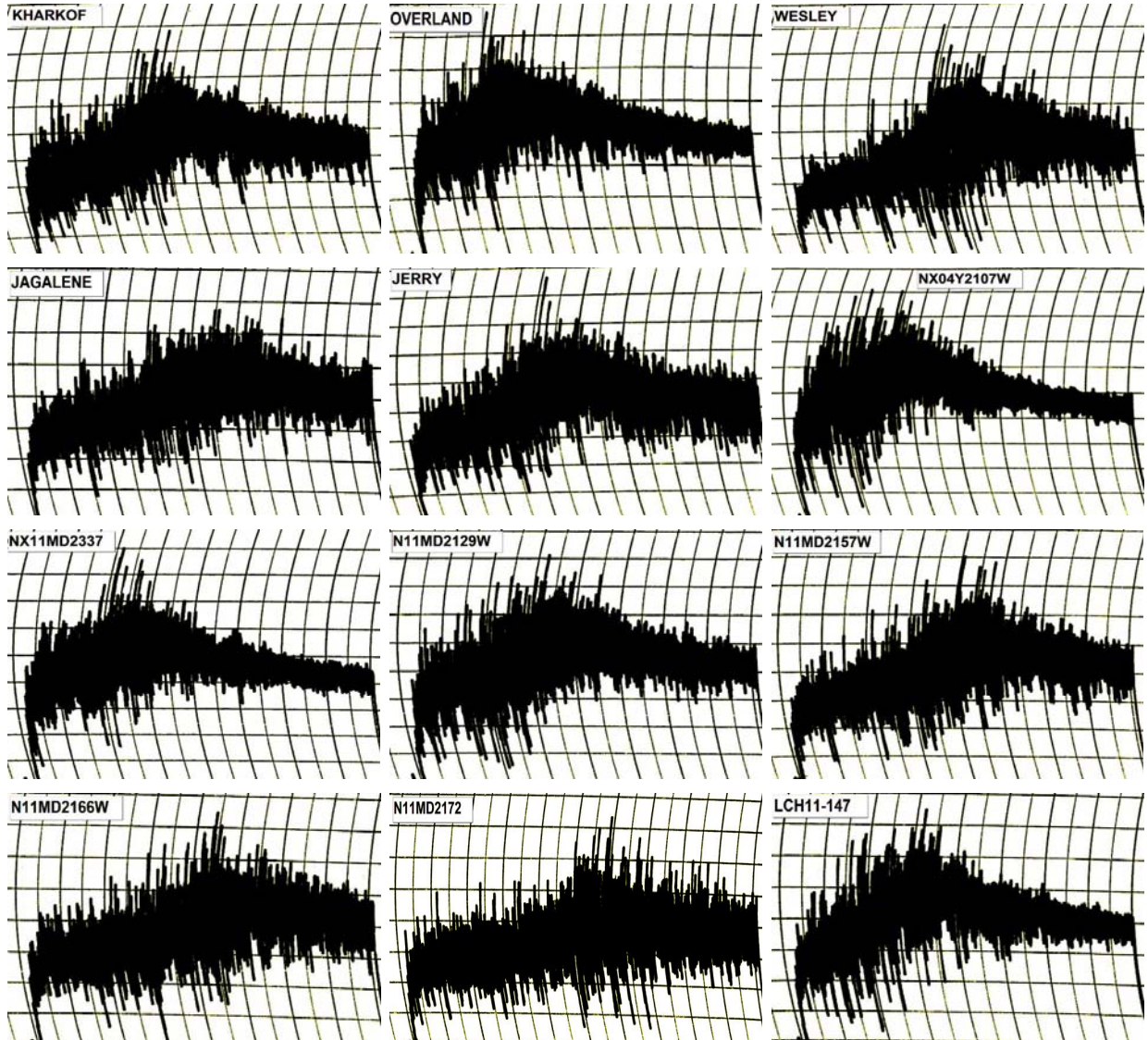
LINE	Wheat		Flour			Noodle Color					
	Protein	Milling Yield	Ash	Protein	PPO	L @ 0	a @ 0	b @ 0	Delta L 24 hrs	Delta a 24 hrs	Delta b 24 hrs
	(%)	(%)	(%)	(%)							
Kharkof	15.1	66.8	0.41	13.7	0.685	81.46	-2.63	22.56	-11.00	1.53	1.61
Overland	12.8	69.3	0.41	11.3	0.671	81.69	-2.62	22.22	-9.52	1.19	2.36
Wesley	13.5	70.3	0.36	12.6	0.774	83.12	-2.38	19.97	-12.22	1.27	2.76
Jagalene	13.3	69.1	0.41	12.2	0.570	81.71	-2.57	23.44	-10.37	1.55	0.49
Jerry	13.1	70.2	0.41	12.0	0.667	82.56	-2.84	24.48	-12.11	1.27	1.01
NX04Y2107W	13.8	58.2	0.38	12.6	0.725	83.75	-2.12	19.36	-14.96	1.26	4.91
NX11MD2337	13.1	60.6	0.41	12.1	0.689	84.29	-2.40	20.14	-13.82	0.89	4.83
N11MD2129W	13.4	69.0	0.40	12.4	0.733	81.53	-2.36	20.95	-10.16	1.15	1.88
N11MD2157W	13.0	69.1	0.40	11.8	0.592	82.93	-2.46	20.74	-9.88	0.93	3.83
N11MD2166W	12.4	68.5	0.38	10.9	0.602	83.58	-2.51	20.87	-9.33	0.91	1.98
N11MD2172	12.4	68.4	0.45	10.9	0.561	82.16	-2.47	22.71	-10.12	0.63	4.27
LCH11-147	13.6	68.8	0.37	12.1	0.708	82.26	-2.81	22.81	-9.50	1.22	1.47
LCH10-187	13.8	64.7	0.38	12.3	0.612	80.56	-2.21	21.81	-10.62	1.08	3.48
LCH11-1064	12.8	65.9	0.42	11.8	0.621	80.90	-2.38	23.50	-9.82	1.36	2.06
LCH09-06	13.5	70.0	0.37	12.3	0.681	80.93	-2.09	22.14	-13.24	1.84	1.34
LCH13NEDH-14-53	11.9	69.5	0.44	10.8	0.652	82.12	-3.20	23.69	-9.18	1.44	0.32
NE10507	12.7	68.9	0.38	11.6	0.708	81.97	-2.32	21.24	-10.13	1.05	3.46
NE10589	12.6	68.8	0.42	11.8	0.609	82.52	-2.34	20.49	-10.94	0.99	3.30
NHH11569	12.1	71.4	0.40	11.0	0.679	82.10	-2.73	22.75	-9.72	0.75	3.66
NI09710H	11.8	70.7	0.35	10.4	0.529	81.71	-2.74	23.57	-9.59	0.91	3.28
NW09627	11.4	70.7	0.42	10.2	0.286	84.39	-2.81	20.64	-9.05	0.33	6.80
NI10718W	12.1	71.1	0.42	10.8	0.629	83.56	-2.76	21.94	-10.27	1.07	3.39
NE10683	12.0	69.1	0.40	10.6	0.671	81.18	-2.23	21.99	-9.19	0.82	2.79
W434 = Flourish	13.3	71.0	0.45	12.1	0.570	83.31	-2.54	21.71	-10.28	1.14	2.73
W454 = Emerson	13.5	70.5	0.39	12.7	0.644	81.54	-2.28	24.04	-7.06	1.30	-0.71
NH11490	13.5	68.2	0.38	12.3	0.644	82.02	-2.55	23.27	-10.46	0.85	1.86
HV9W06-505	14.0	67.1	0.40	12.8	0.549	81.00	-2.54	23.36	-8.36	1.14	1.77
FA9W10-6012R	13.8	66.3	0.46	12.7	0.577	79.52	-2.35	24.59	-8.15	0.87	0.76
MT1078	12.1	69.3	0.44	10.9	0.683	82.37	-2.48	22.47	-12.03	1.26	3.01
MT1090	12.7	69.2	0.43	11.7	0.647	81.26	-2.44	24.68	-10.27	1.00	1.36
SD08080	13.5	70.0	0.35	11.9	0.727	81.95	-1.93	20.50	-10.37	1.23	1.83
SD08200	12.8	69.3	0.37	11.6	0.615	82.39	-2.62	22.46	-10.11	1.22	1.25
SD09113	13.6	69.2	0.39	12.4	0.704	80.22	-2.82	25.70	-12.28	1.69	1.21
SD09118	12.9	70.2	0.41	11.9	0.622	80.80	-2.38	23.51	-10.74	1.05	2.86
SD09138	13.2	71.2	0.45	12.1	0.583	80.81	-2.65	24.11	-10.27	1.25	0.42
SD09192	12.5	68.5	0.47	11.4	0.643	81.75	-2.73	23.53	-11.12	1.73	1.92
SD09227	13.2	69.8	0.43	11.9	0.636	80.13	-2.61	24.23	-11.69	1.54	1.92
SD10257-2	12.9	69.8	0.39	11.4	0.561	81.52	-2.38	22.17	-10.68	1.20	1.88
SD10W153	12.4	67.7	0.40	11.1	0.689	81.19	-2.66	22.94	-8.99	0.90	2.03
SD110060-9	13.7	68.3	0.39	12.3	0.590	80.75	-1.99	21.83	-9.68	0.93	2.84

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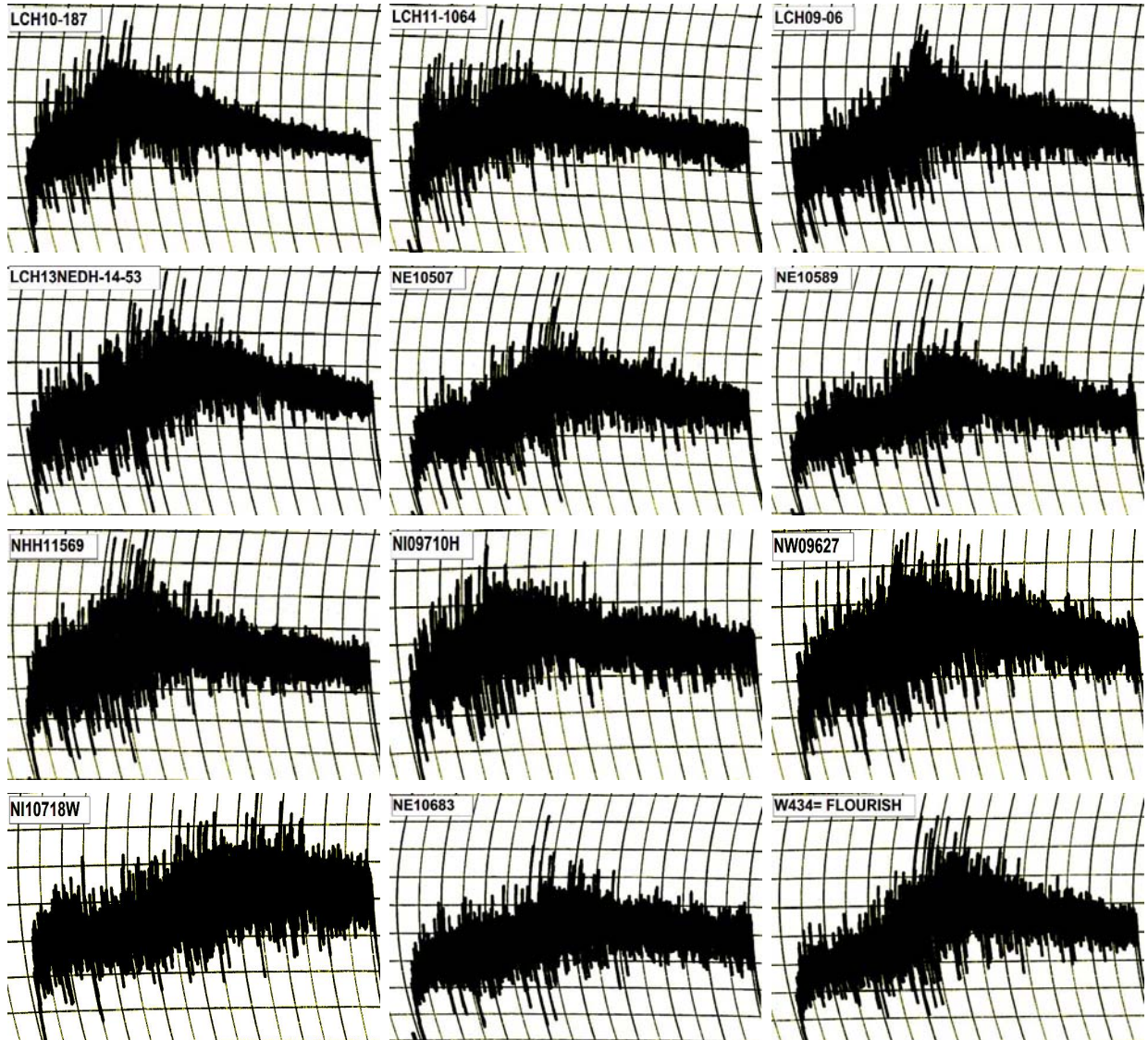
Northern High Plains

	Flour Protein	Mixograph			
		Absorption	As-Is	Corrected	Tolerance
Line	(%)	(%)	(min)	(min)	
Kharkof	13.7	63.4	3.38	3.38	4
Overland	11.3	61.8	2.38	2.17	1
Wesley	12.6	64.0	4.38	4.38	3
Jagalene	12.2	63.2	4.63	4.63	4
Jerry	12.0	62.9	3.88	3.87	4
NX04Y2107W	12.6	65.4	2.50	2.50	1
NX11MD2337	12.1	65.7	2.63	2.63	1
N11MD2129W	12.4	63.7	3.50	3.50	2
N11MD2157W	11.8	61.7	4.63	4.52	4
N11MD2166W	10.9	61.2	4.50	3.93	4
N11MD2172	10.9	61.2	5.50	4.80	4
LCH11-147	12.1	63.1	3.25	3.25	0
LCH10-187	12.3	63.3	2.38	2.38	0
LCH11-1064	11.8	62.6	2.75	2.69	1
LCH09-06	12.3	63.4	3.13	3.13	2
LCH13NEDH-14-53	10.8	59.9	3.50	2.98	2
NE10507	11.6	62.3	3.50	3.33	2
NE10589	11.8	62.6	3.50	3.41	2
NHH11569	11.0	61.3	3.00	2.65	2
NI09710H	10.4	60.3	2.50	2.02	2
NW09627	10.2	61.0	3.13	2.46	2
NI10718W	10.8	61.0	4.75	4.09	4
NE10683	10.6	60.6	3.75	3.12	3
W434 = Flourish	12.1	64.6	4.00	4.00	3
W454 = Emerson	12.7	61.6	6.38	6.38	5
NH11490	12.3	64.5	3.50	3.50	2
HV9W06-505	12.8	64.2	2.88	2.88	1
FA9W10-6012R	12.7	64.0	3.13	3.13	2
MT1078	10.9	61.2	5.50	4.78	5
MT1090	11.7	62.4	7.00	6.72	5
SD08080	11.9	63.9	4.00	3.97	3
SD08200	11.6	62.4	4.88	4.67	4
SD09113	12.4	62.1	2.88	2.88	1
SD09118	11.9	61.7	3.50	3.44	3
SD09138	12.1	62.1	4.13	4.13	2
SD09192	11.4	62.0	5.13	4.77	3
SD09227	11.9	62.8	3.38	3.35	2
SD10257-2	11.4	61.9	1.88	1.75	1
SD10W153	11.1	61.5	4.13	3.69	3
SD110060-9	12.3	63.5	5.00	5.00	4

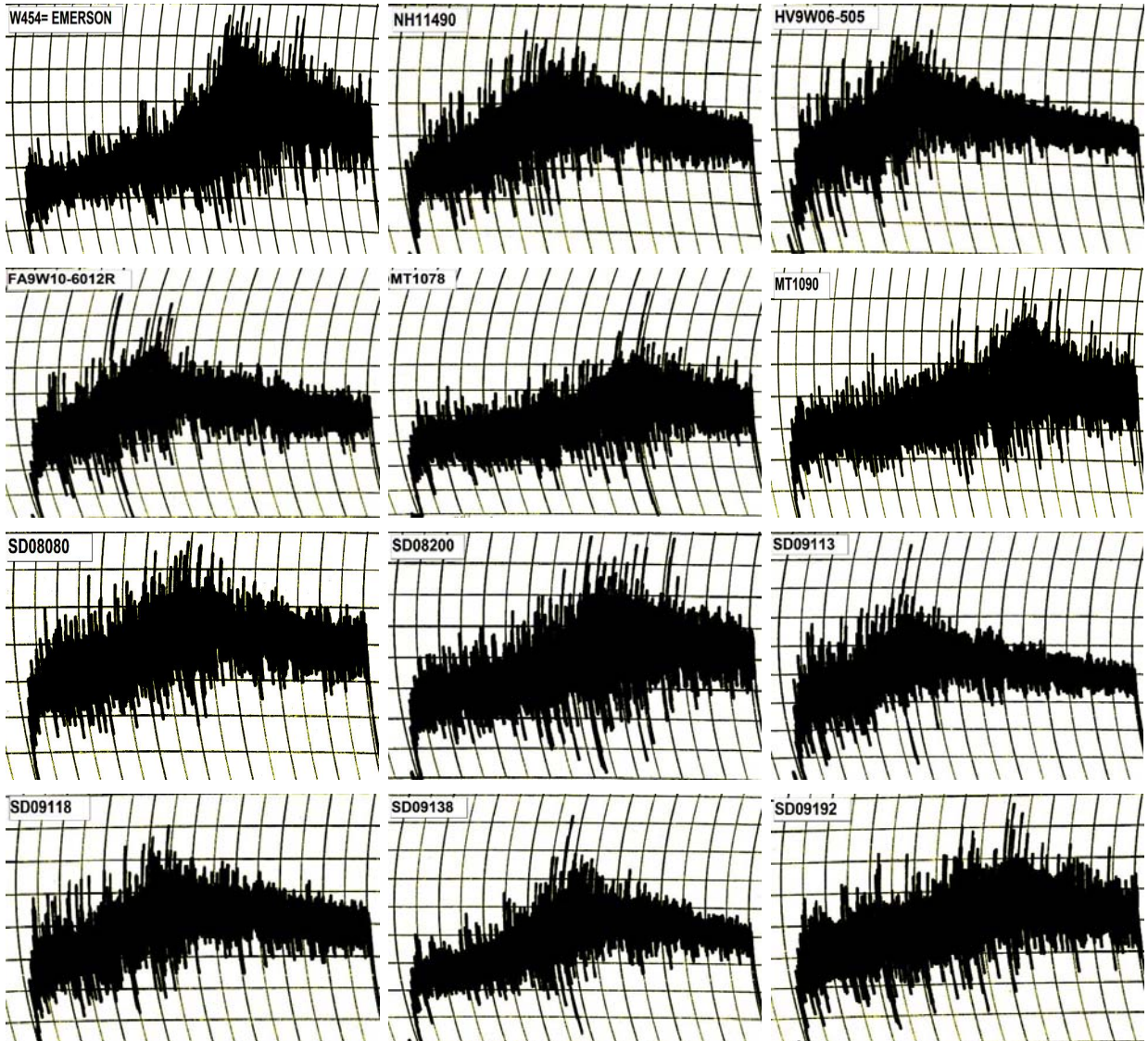
2014 NRPN Intraregional Production Zone Northern High Plains



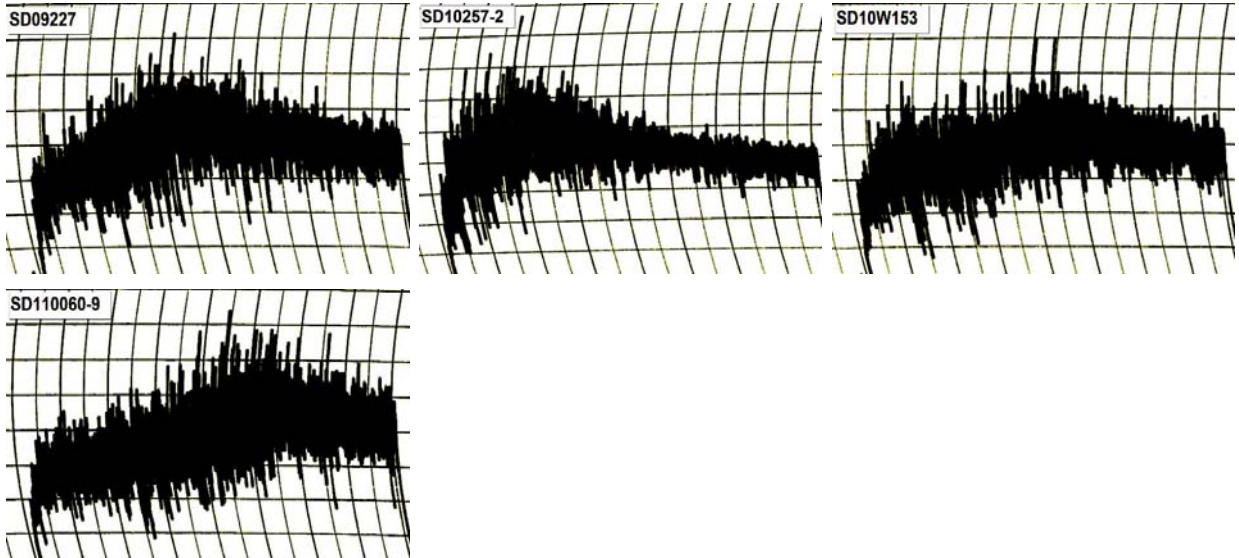
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2014 NRPN Intraregional Production Zone Northern High Plains



2014 NRPN Intraregional Production Zone Northern High Plains



2014 NRPN Intraregional Production Zone

Northern High Plains

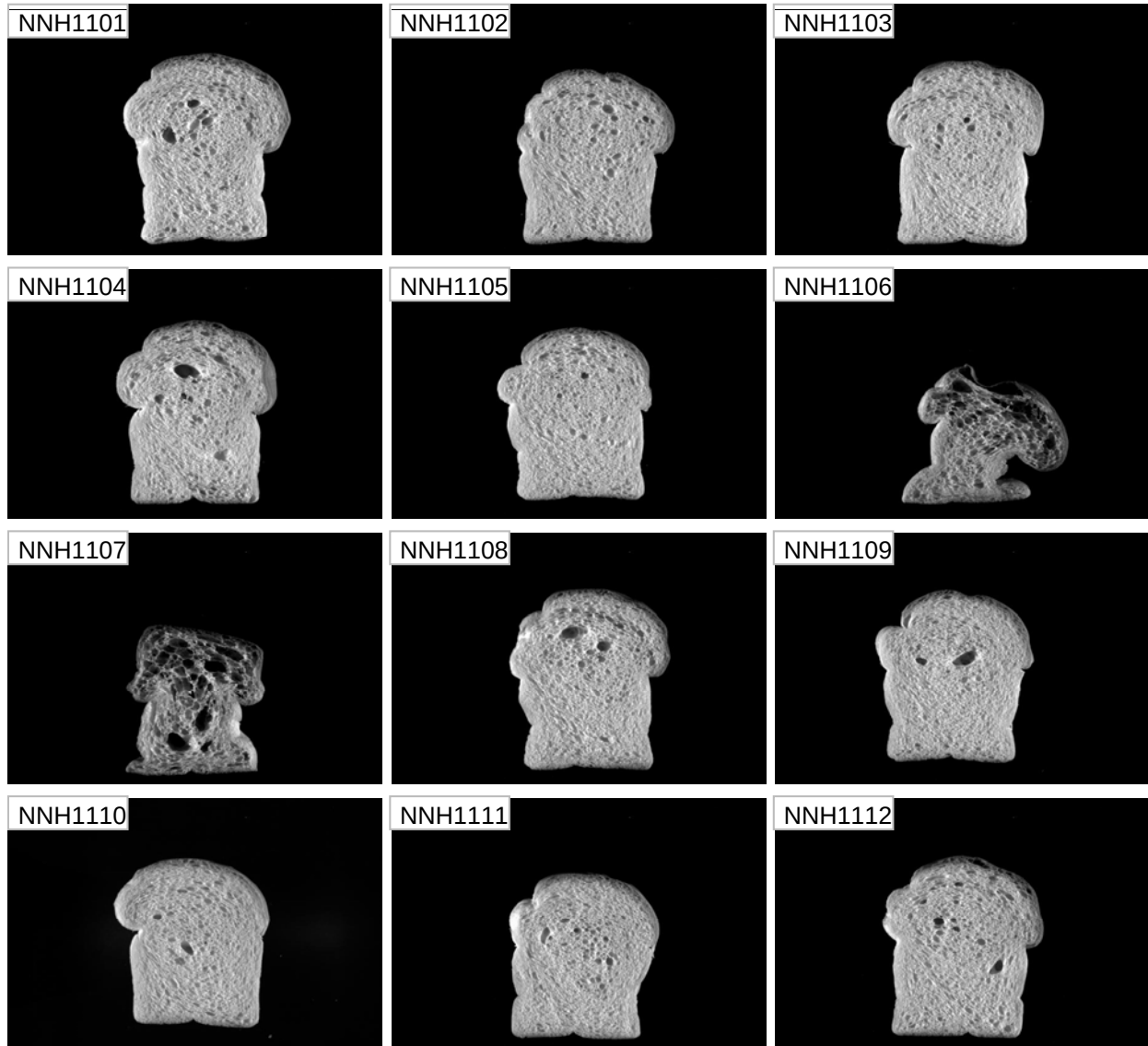
Line	RVA						
	Stirring Number (RVU)	Peak Viscosity (RVU)	Trough Viscosity (RVU)	Breakdown (RVU)	Final Viscosity (RVU)	Set back (RVU)	Peak Time (min)
Kharkof	145.83	240.83	169.75	71.08	298.00	128.25	6.40
Overland	131.83	228.08	158.08	70.00	292.92	134.83	6.27
Wesley	131.50	226.83	152.92	73.92	289.58	136.67	6.20
Jagalene	122.00	230.17	155.33	74.83	289.08	133.75	6.20
Jerry	143.00	202.33	148.92	53.42	278.92	130.00	6.20
NX04Y2107W	69.17	111.25	16.67	94.58	24.42	7.75	3.40
NX11MD2337	103.50	164.17	53.17	111.00	75.17	22.00	3.73
N11MD2129W	116.75	270.58	160.67	109.92	272.42	111.75	6.27
N11MD2157W	135.92	227.58	154.42	73.17	285.25	130.83	6.27
N11MD2166W	134.83	236.75	154.42	82.33	292.00	137.58	6.13
N11MD2172	111.67	265.75	159.00	106.75	297.00	138.00	6.13
LCH11-147	141.17	249.08	174.00	75.08	313.00	139.00	6.33
LCH10-187	113.33	174.08	99.50	74.58	197.83	98.33	6.00
LCH11-1064	132.08	237.33	154.17	83.17	274.92	120.75	6.33
LCH09-06	127.92	244.92	158.08	86.83	290.92	132.83	6.20
LCH13NEDH-14-53	118.50	273.92	161.42	112.50	278.00	116.58	6.20
NE10507	139.17	295.50	174.42	121.08	281.75	107.33	6.40
NE10589	131.08	221.75	159.67	62.08	286.33	126.67	6.33
NHH11569	120.00	244.92	174.92	70.00	318.33	143.42	6.20
NI09710H	129.75	230.83	151.58	79.25	287.42	135.83	6.13
NW09627	92.75	218.92	127.75	91.17	250.00	122.25	6.00
NI10718W	123.33	212.83	132.00	80.83	259.00	127.00	6.00
NE10683	133.17	277.08	180.83	96.25	313.75	132.92	6.33
W434 = Flourish	125.50	253.67	166.08	87.58	293.42	127.33	6.27
W454 = Emerson	112.92	236.50	141.33	95.17	264.17	122.83	6.13
NH11490	140.33	236.67	167.17	69.50	309.33	142.17	6.27
HV9W06-505	148.00	248.58	170.00	78.58	301.75	131.75	6.33
FA9W10-6012R	161.00	247.00	182.33	64.67	309.92	127.58	6.47
MT1078	137.42	255.08	172.50	82.58	314.67	142.17	6.27
MT1090	135.83	252.92	169.08	83.83	310.00	140.92	6.27
SD08080	147.08	234.17	164.42	69.75	294.67	130.25	6.33
SD08200	135.08	207.08	145.17	61.92	275.08	129.92	6.20
SD09113	144.00	250.83	175.17	75.67	307.92	132.75	6.33
SD09118	139.50	234.75	162.33	72.42	299.75	137.42	6.27
SD09138	121.58	222.08	145.42	76.67	281.33	135.92	6.07
SD09192	133.00	266.17	185.00	81.17	331.33	146.33	6.33
SD09227	156.67	231.00	168.33	62.67	303.25	134.92	6.40
SD10257-2	134.92	230.17	167.58	62.58	311.92	144.33	6.27
SD10W153	136.42	263.67	160.00	103.67	275.08	115.08	6.27
SD110060-9	138.25	236.33	159.75	76.58	292.67	132.92	6.27

2014 NRPN Intraregional Production Zone

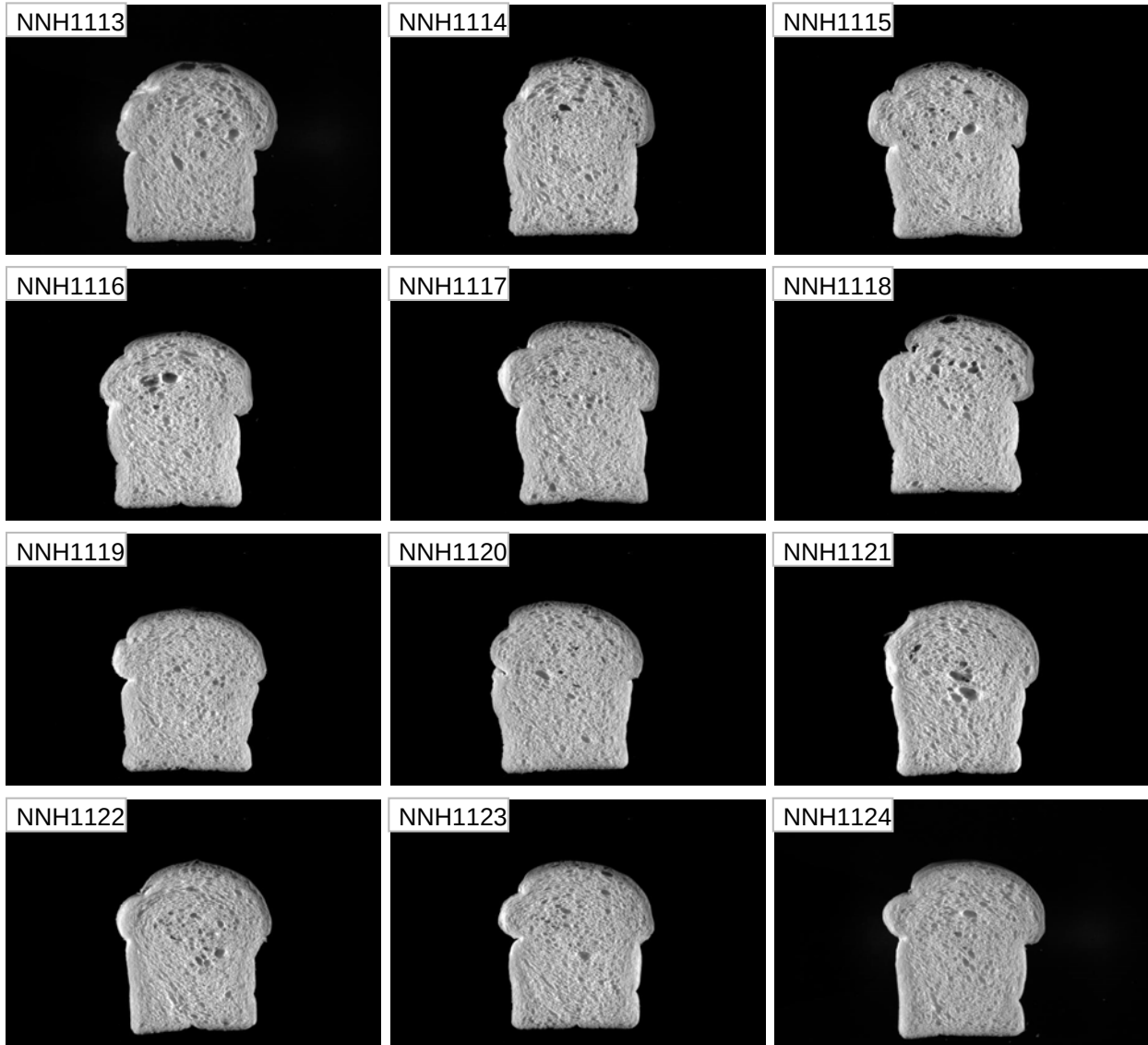
Northern High Plains

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	13.7	63.8	4.75	4.75	173.2	8.0	3.0	960	6.3	61
Overland	11.3	60.0	3.13	2.85	169.1	7.3	2.5	830	5.6	64
Wesley	12.6	64.2	7.00	7.00	173.4	7.5	4.5	950	6.3	67
Jagalene	12.2	63.1	5.00	5.00	172.9	7.4	3.5	925	6.2	68
Jerry	12.0	63.0	5.00	4.98	172.5	7.4	4.0	855	5.7	62
NX04Y2107W	12.6	64.9	4.00	4.00	174.7	7.7	0.0	945	6.2	67
NX11MD2337	12.1	63.8	3.75	3.75	174.6	7.4	0.0	1015	6.7	78
N11MD2129W	12.4	64.6	4.50	4.50	174.9	7.5	3.0	925	6.2	66
N11MD2157W	11.8	64.0	6.50	6.35	173.5	7.2	4.0	860	5.7	64
N11MD2166W	10.9	63.5	6.00	5.24	171.5	7.0	3.5	815	5.5	64
N11MD2172	10.9	62.1	9.00	7.85	171.0	7.1	3.0	835	5.6	67
LCH11-147	12.1	62.2	4.00	4.00	171.7	7.3	4.5	885	6.0	64
LCH10-187	12.3	62.0	3.00	3.00	172.7	7.6	2.0	940	6.4	69
LCH11-1064	11.8	62.9	3.13	3.06	172.4	7.3	3.0	890	5.9	67
LCH09-06	12.3	63.4	4.00	4.00	172.8	7.6	4.0	945	6.3	69
LCH13NEDH-14-53	10.8	60.7	4.50	3.84	170.3	7.2	4.5	875	5.8	73
NE10507	11.6	63.0	5.25	5.00	172.9	7.5	5.0	930	6.2	73
NE10589	11.8	63.9	5.00	4.87	173.6	7.8	3.5	895	5.8	68
NHH11569	11.0	62.2	5.00	4.41	171.6	6.8	4.0	805	5.3	63
NI09710H	10.4	61.1	3.75	3.03	170.9	7.0	3.5	800	5.3	67
NW09627	10.2	62.0	5.00	3.94	171.4	7.2	4.5	855	5.7	76
NI10718W	10.8	60.9	7.13	6.14	169.6	7.0	4.5	835	5.7	68
NE10683	10.6	63.0	5.63	4.69	172.1	7.2	5.0	830	5.6	69
W434 = Flourish	12.1	64.0	5.25	5.25	172.3	7.5	4.5	925	6.2	69
W454 = Emerson	12.7	61.7	10.00	10.00	170.1	7.5	4.0	1005	6.9	73
NH11490	12.3	64.2	4.00	4.00	174.0	7.6	4.0	920	6.1	67
HV9W06-505	12.8	62.3	3.38	3.38	172.2	7.6	3.0	940	6.4	65
FA9W10-6012R	12.7	63.8	4.50	4.50	173.0	7.8	4.5	975	6.6	70
MT1078	10.9	62.1	7.50	6.52	171.0	7.2	4.5	925	6.2	78
MT1090	11.7	62.8	9.50	9.12	171.6	7.2	4.5	880	5.9	67
SD08080	11.9	63.9	4.75	4.72	173.4	7.4	4.0	915	6.1	69
SD08200	11.6	63.3	8.00	7.66	172.4	7.2	3.5	925	6.1	72
SD09113	12.4	62.8	4.13	4.13	172.8	7.6	3.5	900	6.0	64
SD09118	11.9	63.2	4.50	4.42	172.8	7.6	3.5	910	6.0	69
SD09138	12.1	61.2	5.00	5.00	170.6	7.7	4.0	935	6.3	70
SD09192	11.4	62.9	7.25	6.74	172.1	7.3	4.5	910	6.1	72
SD09227	11.9	62.9	4.13	4.09	173.3	7.3	4.0	850	5.6	62
SD10257-2	11.4	61.4	3.00	2.79	171.0	7.4	3.0	840	5.6	64
SD10W153	11.1	62.5	4.50	4.02	170.9	7.3	3.0	850	5.8	67
SD110060-9	12.3	64.2	7.00	7.00	173.6	7.2	3.5	905	6.0	65

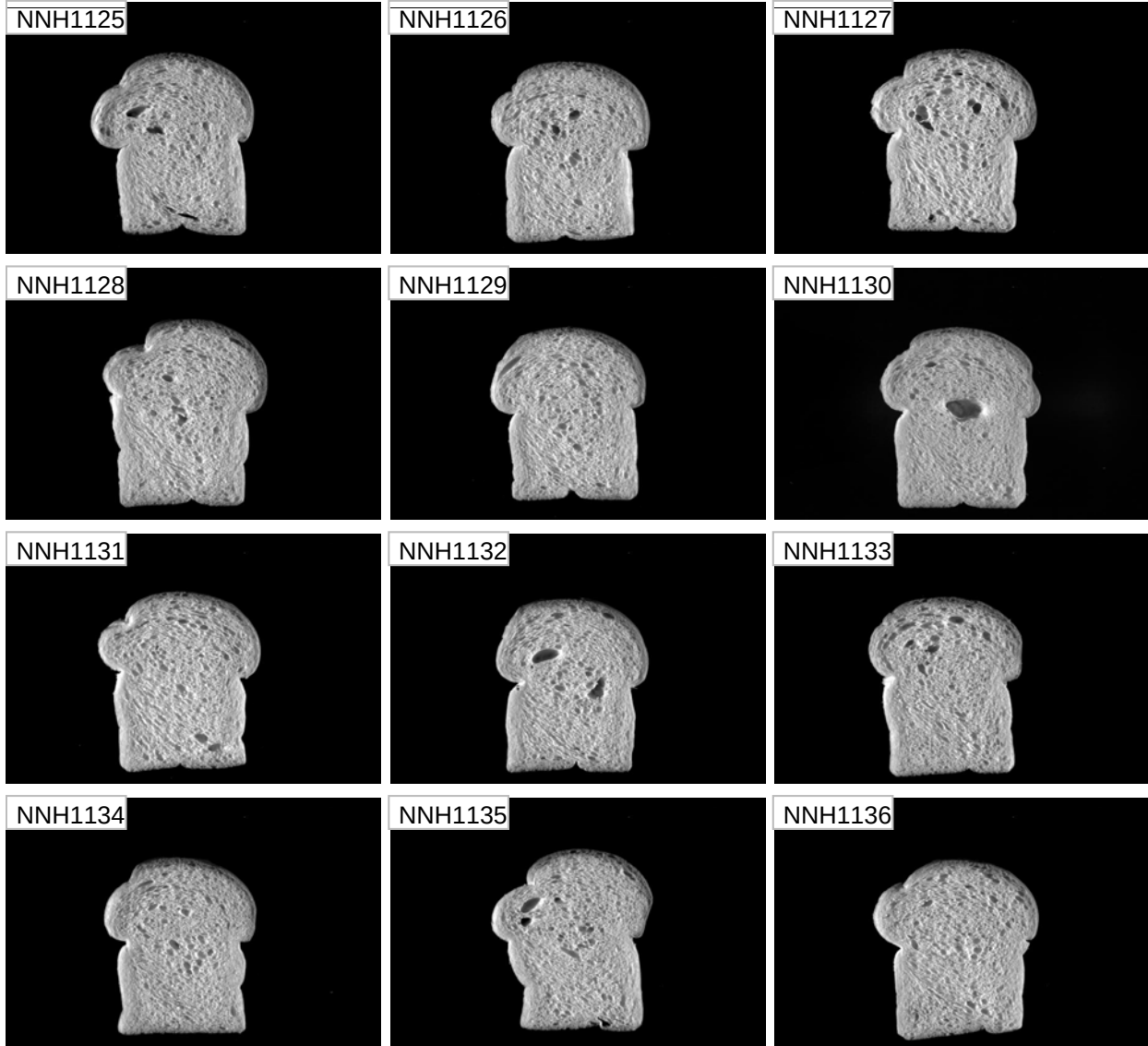
2014 NRPN Intraregional Production Zone Northern High Plains



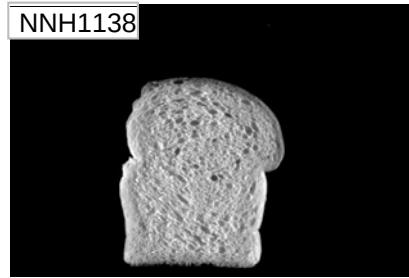
2014 NRPN Intraregional Production Zone Northern High Plains



2014 NRPN Intraregional Production Zone Northern High Plains



2014 NRPN Intraregional Production Zone Northern High Plains





Hard Winter Wheat Quality Report 2014 NRPN-NP

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

ID	Milling Score	Rating	%	Baking Score	Rating	%	1RS	Trait Deficiencies
Kharkof	43.4	Very Poor	68.7	57.8	Very Good	86.9		8,
Overland	58.6	Good	92.8	36.7	Very Poor	55.1		16,19,20,
Wesley	58.9	Good	93.2	48.0	Average	72.2		16,
Jagalene	55.9	Average	88.5	53.5	Good	80.4		
Jerry	57.8	Good	91.5	51.7	Good	77.8		
NX04Y2107W	40.5	Very Poor	64.2	47.6	Average	71.6		8,10,16,21,
NX11MD2337	42.5	Very Poor	67.3	52.1	Good	78.3		1,4,8,16,21,
N11MD2129W	59.9	Very Good	94.8	61.3	Very Good	92.2		
N11MD2157W	57.2	Good	90.6	40.7	Poor	61.2		
N11MD2166W	55.6	Average	88.1	33.9	Very Poor	51.0		
N11MD2172	51.2	Very Poor	81.0	43.7	Average	65.8		9,14,15,
LCH11-147	55.4	Poor	87.7	46.6	Average	70.1		16,
LCH10-187	55.8	Average	88.3	34.3	Very Poor	51.7		14,16,21,
LCH11-1064	53.4	Poor	84.5	35.9	Very Poor	54.0		16,21,
LCH09-06	57.2	Good	90.6	50.0	Good	75.2		16,
LCH13NEDH-14-53	57.0	Average	90.3	36.4	Very Poor	54.7		16,17,
NE10507	53.1	Poor	84.1	43.7	Poor	65.8		
NE10589	54.8	Poor	86.7	64.3	Very Good	96.7		16,
NHH11569	58.2	Good	92.1	47.7	Average	71.8		16,18,20,
NI09710H	55.7	Average	88.2	36.9	Poor	55.5		1,11,12,13,16,17,
NW09627	58.9	Very Good	93.2	54.0	Good	81.2		11,16,
NI10718W	61.7	Very Good	97.8	58.0	Very Good	87.3		
NE10683	55.8	Average	88.3	40.1	Poor	60.4		
Flourish	57.8	Good	91.5	66.5	Very Good	100.0		5,
Emerson	59.2	Very Good	93.7	59.0	Very Good	88.8		2,4,14,15,
NH11490	63.2	Very Good	100.0	37.0	Poor	55.7		16,
HV9W06-505	55.5	Poor	87.9	52.8	Good	79.4		16,
FA9W10-6012R	52.3	Very Poor	82.9	63.4	Very Good	95.3		5,9,10,
MT1078	50.4	Very Poor	79.9	50.0	Good	75.2		1,3,14,15,
MT1090	51.3	Very Poor	81.2	47.1	Average	70.9		1,9,14,15,

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



Hard Winter Wheat Quality Report 2014 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
SD08080	59.3	Very Good	93.9	44.8	Average	67.3		
SD08200	57.3	Average	90.7	38.8	Poor	58.4		
SD09113	55.3	Poor	87.5	30.7	Very Poor	46.2		2,16,
SD09118	56.7	Average	89.8	36.6	Very Poor	55.1		16,
SD09138	60.3	Very Good	95.4	42.5	Poor	63.9		16,
SD09192	52.2	Very Poor	82.6	59.9	Very Good	90.1	1AL	3,5,9,10,
SD09227	57.6	Good	91.2	37.6	Poor	56.5		16,21,
SD10257-2	60.5	Very Good	95.8	21.3	Very Poor	32.1		12,14,15,16,17,18,19,20,21,
SD10W153	52.7	Poor	83.4	45.7	Average	68.7		
SD110060-9	55.4	Poor	87.7	53.6	Good	80.6		

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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	60.4	12.8	0.8	31.5	7.7	2.63	0.29	43 18	MIXED	28--31--24--17--03	
Overland	60.7	12.2	0.6	33.3	8.5	2.69	0.31	64 14	HARD	01--10--26--63--01	
Wesley	59.3	11.5	0.7	34.7	9.0	2.77	0.34	59 13	HARD	02--16--32--50--01	
Jagalene	60.9	11.7	0.7	32.9	9.1	2.76	0.36	69 15	HARD	01--07--15--77--01	
Jerry	59.8	11.9	0.7	35.1	9.2	2.72	0.36	54 15	HARD	09--20--36--35--02	
NX04Y2107W	59.6	12.1	1.1	34.9	8.7	2.79	0.34	60 14	HARD	02--13--30--55--01	
NX11MD2337	57.5	12.0	0.9	29.7	9.0	2.57	0.35	70 15	HARD	02--04--15--79--01	
N11MD2129W	62.5	11.4	0.7	31.0	7.4	2.60	0.31	73 15	HARD	00--02--15--83--01	
N11MD2157W	61.0	11.1	1.1	30.2	7.7	2.67	0.32	61 15	HARD	04--13--31--52--01	
N11MD2166W	60.8	11.8	1.5	31.6	9.0	2.61	0.34	59 17	HARD	07--15--26--52--02	
N11MD2172	59.0	11.0	1.1	30.0	8.9	2.59	0.35	68 17	HARD	03--07--18--72--01	
LCH11-147	59.2	11.1	1.7	32.2	8.1	2.65	0.32	55 15	HARD	06--20--37--37--02	
LCH10-187	60.8	11.5	1.3	34.3	8.8	2.74	0.33	65 14	HARD	01--06--25--68--01	
LCH11-1064	60.4	11.6	1.0	34.2	9.0	2.70	0.36	70 14	HARD	01--04--17--78--01	
LCH09-06	59.6	10.8	1.0	33.1	8.0	2.69	0.33	60 14	HARD	04--10--31--55--01	
LCH13NEDH-14-53	60.6	12.0	0.9	33.1	9.3	2.74	0.35	66 14	HARD	01--07--24--68--01	
NE10507	59.4	11.5	1.0	31.9	8.6	2.66	0.34	60 16	HARD	04--13--27--56--01	
NE10589	60.5	11.4	0.9	30.5	8.0	2.69	0.35	66 15	HARD	02--07--24--67--01	
NHH11569	61.5	11.3	1.0	30.2	8.8	2.66	0.34	65 15	HARD	02--07--23--68--01	
NI09710H	58.3	11.2	0.9	35.2	9.1	2.77	0.34	58 13	HARD	04--13--36--47--01	
NW09627	60.0	11.8	0.7	31.8	9.1	2.69	0.35	59 14	HARD	02--16--31--51--01	
NI10718W	60.4	11.7	0.9	32.8	7.7	2.68	0.30	63 14	HARD	01--10--29--60--01	
NE10683	59.1	11.2	0.8	36.2	8.6	2.76	0.34	50 17	MIXED	13--28--32--27--03	
W434 = Flourish	60.4	11.2	0.9	33.3	8.9	2.73	0.38	57 15	HARD	05--18--34--43--01	
W454 = Emerson	60.6	11.5	0.8	27.0	7.2	2.46	0.28	60 14	HARD	04--11--29--56--01	
NH11490	61.5	11.2	0.8	32.7	8.0	2.69	0.33	60 13	HARD	03--12--29--56--01	
HV9W06-505	62.4	10.9	0.8	32.7	9.0	2.80	0.34	69 16	HARD	02--06--19--73--01	
FA9W10-6012R	61.3	10.5	1.0	32.7	8.3	2.76	0.38	71 14	HARD	01--04--13--82--01	
MT1078	58.1	11.8	0.9	32.9	9.6	2.61	0.36	68 15	HARD	01--07--18--74--01	
MT1090	58.4	11.7	0.9	31.4	8.5	2.64	0.36	67 16	HARD	02--06--20--72--01	
SD08080	60.8	10.6	0.7	33.7	7.4	2.73	0.33	56 15	HARD	06--22--28--44--02	
SD08200	61.3	11.0	0.9	35.9	9.3	2.74	0.35	59 16	HARD	03--17--29--51--01	
SD09113	59.3	11.4	0.8	29.3	7.4	2.64	0.32	67 14	HARD	01--06--20--73--01	
SD09118	60.4	11.3	0.9	31.2	8.9	2.68	0.35	67 16	HARD	01--09--21--69--01	
SD09138	62.1	11.7	1.1	32.6	9.0	2.77	0.35	66 15	HARD	00--10--25--65--01	
SD09192	60.2	11.5	0.9	36.8	10.2	2.76	0.38	66 13	HARD	02--07--18--73--01	
SD09227	61.1	11.1	1.0	31.1	8.4	2.70	0.32	71 16	HARD	01--05--16--78--01	
SD10257-2	61.7	11.0	1.1	37.0	8.4	2.89	0.31	65 14	HARD	02--08--23--67--01	
SD10W153	60.3	10.8	0.9	34.4	9.1	2.80	0.37	61 15	HARD	04--12--30--54--01	
SD110060-9	61.0	11.3	1.1	30.0	7.7	2.59	0.31	66 15	HARD	01--08--20--71--01	

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Northern Plains

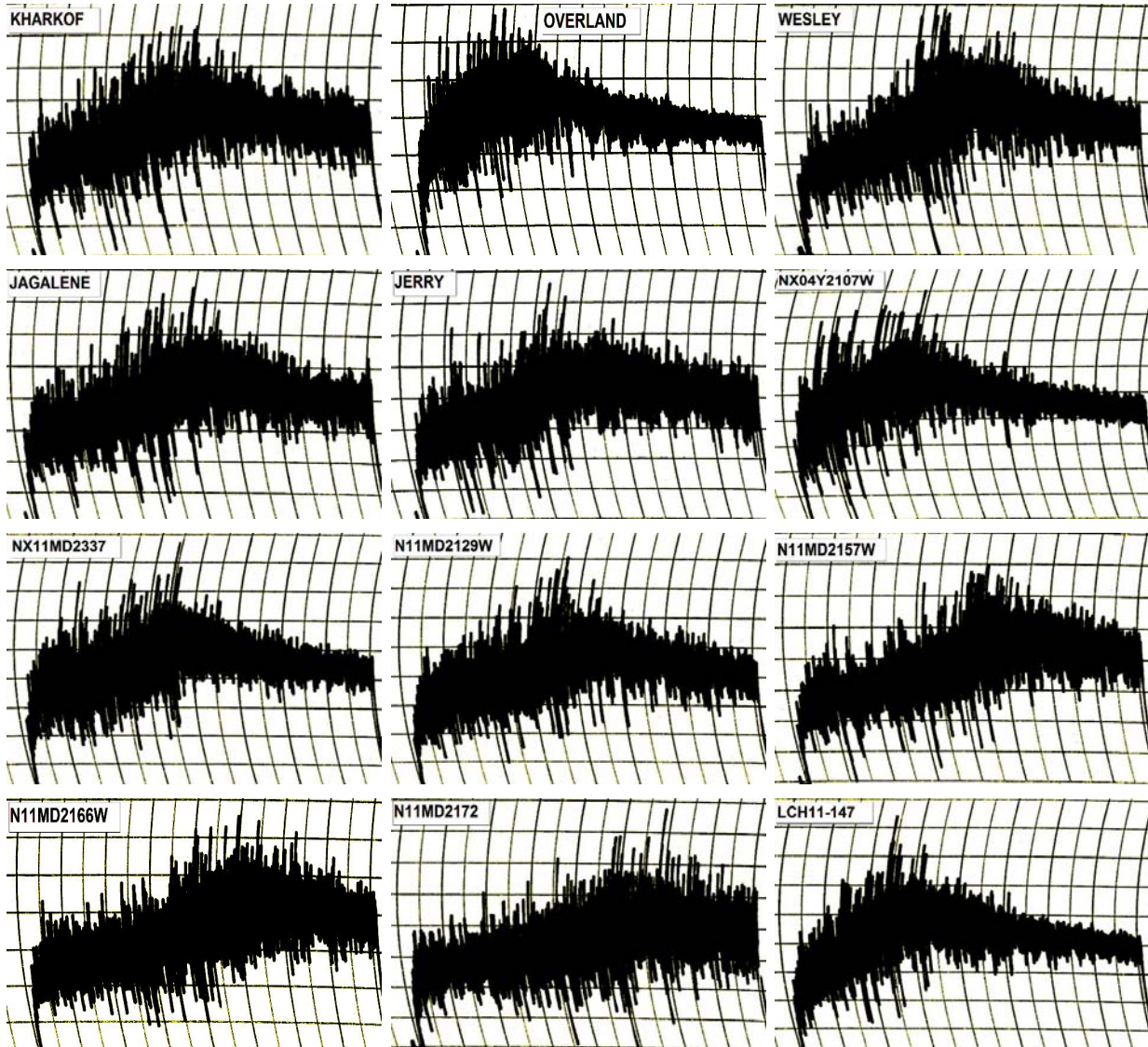
LINE	Wheat		Flour			Noodle Color					
	Protein	Milling Yield	Ash	Protein	PPO	L @ 0	a @ 0	b @ 0	Delta L 24 hrs	Delta a 24 hrs	Delta b 24 hrs
	(%)	(%)	(%)	(%)							
Kharkof	14.6	62.9	0.39	13.3	0.545	80.28	-1.72	21.79	-9.79	0.97	1.93
Overland	13.2	68.6	0.41	11.9	0.531	79.54	-1.44	21.24	-9.48	1.01	2.18
Wesley	14.3	69.6	0.41	13.3	0.678	80.60	-1.72	20.86	-11.44	1.28	1.45
Jagalene	13.5	67.9	0.45	12.2	0.521	80.05	-1.68	22.28	-9.66	1.09	1.57
Jerry	13.9	69.3	0.34	12.6	0.592	82.86	-1.79	20.27	-13.55	1.26	4.93
NX04Y2107W	13.8	58.7	0.44	12.5	0.707	82.32	-1.51	19.65	-17.40	1.85	3.64
NX11MD2337	13.8	62.6	0.43	12.8	0.727	81.47	-1.72	20.88	-15.69	1.59	2.98
N11MD2129W	13.1	68.0	0.44	12.3	0.654	80.86	-1.88	20.83	-11.15	1.41	0.88
N11MD2157W	13.6	68.7	0.42	12.4	0.539	81.62	-1.81	21.01	-9.84	0.86	2.16
N11MD2166W	12.9	68.6	0.36	11.4	0.559	83.06	-1.84	20.22	-10.50	0.99	2.56
N11MD2172	12.9	68.4	0.47	11.6	0.521	80.90	-1.80	22.79	-10.89	1.13	2.39
LCH11-147	14.7	68.3	0.38	13.1	0.574	81.80	-2.08	21.53	-11.47	1.29	1.93
LCH10-187	13.8	66.3	0.40	12.5	0.561	78.77	-1.78	23.39	-10.64	1.21	1.58
LCH11-1064	13.5	65.1	0.39	12.2	0.579	78.97	-1.42	23.30	-11.07	0.93	2.35
LCH09-06	14.1	67.2	0.33	13.1	0.637	80.03	-1.44	21.08	-13.21	1.40	1.60
LCH13NEDH-14-53	12.9	68.6	0.43	11.7	0.631	80.73	-2.27	22.10	-10.84	2.58	-0.61
NE10507	13.0	67.3	0.39	11.7	0.657	79.43	-1.72	22.95	-12.14	1.81	-0.98
NE10589	13.6	66.9	0.41	12.5	0.627	80.24	-1.49	20.96	-10.60	1.40	1.53
NHH11569	13.4	69.1	0.39	12.5	0.650	81.50	-2.23	22.39	-11.07	1.48	1.48
NI09710H	12.8	67.3	0.35	11.3	0.605	80.86	-2.28	23.40	-11.59	1.52	2.02
NW09627	12.3	70.4	0.41	11.1	0.321	82.34	-2.33	22.36	-9.92	1.23	3.84
NI10718W	12.7	69.5	0.38	11.4	0.583	81.42	-2.23	22.76	-9.62	2.48	-1.07
NE10683	12.8	68.8	0.37	11.4	0.651	80.95	-1.43	20.15	-12.79	2.05	1.20
W434 = Flourish	13.6	69.6	0.39	12.1	0.536	81.75	-1.73	21.23	-13.06	1.61	2.22
W454 = Emerson	14.2	69.1	0.34	12.9	0.678	81.69	-1.52	20.66	-11.65	0.83	2.81
NH11490	13.5	69.9	0.36	12.5	0.723	82.03	-1.96	20.40	-9.90	1.29	1.14
HV9W06-505	14.4	65.5	0.37	13.2	0.642	80.23	-1.78	22.39	-9.91	1.24	1.23
FA9W10-6012R	14.6	64.9	0.47	13.3	0.562	79.73	-2.11	23.75	-10.89	1.40	1.46
MT1078	13.1	67.4	0.47	11.8	0.598	80.70	-1.72	20.98	-12.23	1.31	3.68
MT1090	13.2	67.7	0.48	12.0	0.626	81.29	-1.94	22.39	-11.09	1.20	3.05
SD08080	13.7	68.8	0.38	12.3	0.704	81.65	-1.30	18.56	-9.88	0.82	2.39
SD08200	13.6	68.1	0.37	12.2	0.591	81.78	-2.17	21.86	-11.39	1.40	0.95
SD09113	13.8	67.2	0.41	12.1	0.663	80.04	-2.07	23.79	-11.62	1.16	2.54
SD09118	13.0	69.1	0.41	11.8	0.576	80.11	-2.20	24.37	-10.54	1.63	1.82
SD09138	13.4	70.0	0.44	12.5	0.590	82.08	-2.11	21.55	-11.72	1.24	2.00
SD09192	13.6	66.9	0.52	12.3	0.593	80.86	-1.70	21.38	-12.82	1.44	2.68
SD09227	13.2	68.5	0.42	11.9	0.606	80.02	-2.06	22.38	-9.68	1.22	1.81
SD10257-2	13.6	67.8	0.43	12.3	0.542	80.33	-1.55	21.10	-11.29	1.20	2.33
SD10W153	12.8	66.9	0.46	11.6	0.720	79.70	-1.82	22.55	-10.00	1.24	1.86
SD110060-9	13.4	67.4	0.44	11.9	0.607	81.11	-1.78	20.96	-10.47	0.82	2.88

2014 NRPN Intraregional Production Zone

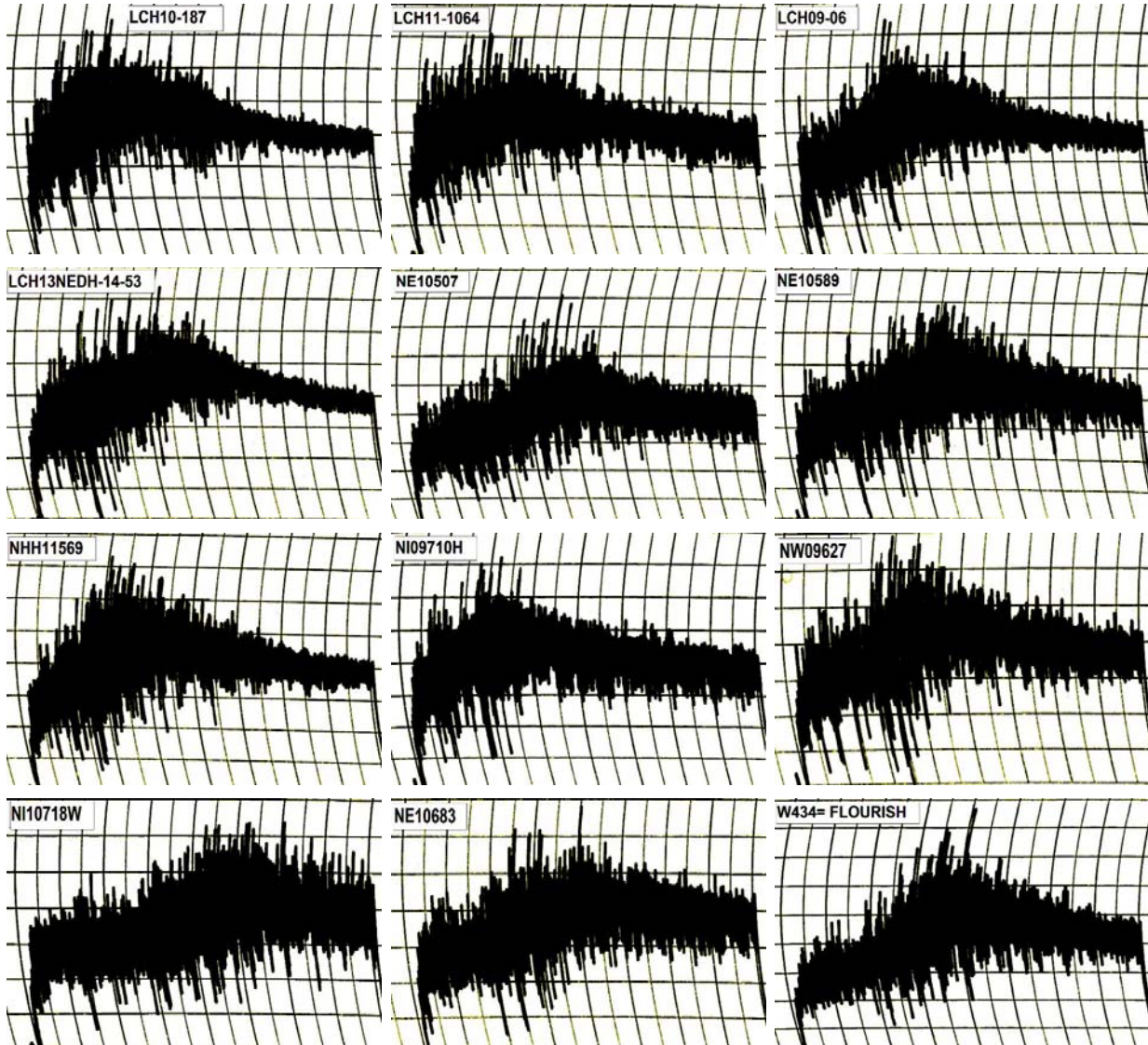
Northern Plains

	Flour Protein	Mixograph			
		Absorption	As-Is	Corrected	Tolerance
Line	(%)	(%)	(min)	(min)	
Kharkof	13.3	62.7	3.88	3.88	4
Overland	11.9	62.7	2.75	2.71	0
Wesley	13.3	64.7	3.88	3.88	2
Jagalene	12.2	63.2	4.00	4.00	3
Jerry	12.6	64.0	3.63	3.63	3
NX04Y2107W	12.5	66.3	2.63	2.63	1
NX11MD2337	12.8	67.7	3.50	3.50	1
N11MD2129W	12.3	63.3	3.63	3.63	3
N11MD2157W	12.4	63.6	4.63	4.63	4
N11MD2166W	11.4	62.9	5.13	4.77	3
N11MD2172	11.6	62.2	5.50	5.23	5
LCH11-147	13.1	64.7	2.88	2.88	1
LCH10-187	12.5	62.7	2.25	2.25	0
LCH11-1064	12.2	61.8	2.50	2.50	2
LCH09-06	13.1	63.9	2.75	2.75	1
LCH13NEDH-14-53	11.7	61.5	3.25	3.15	0
NE10507	11.7	62.4	4.00	3.86	3
NE10589	12.5	63.4	3.63	3.63	2
NHH11569	12.5	63.8	2.50	2.50	1
NI09710H	11.3	60.8	2.25	2.07	2
NW09627	11.1	61.4	3.00	2.67	2
NI10718W	11.4	62.0	5.13	4.77	4
NE10683	11.4	61.8	3.88	3.59	3
W434 = Flourish	12.1	64.5	3.88	3.88	3
W454 = Emerson	12.9	61.9	6.00	6.00	4
NH11490	12.5	64.7	3.00	3.00	1
HV9W06-505	13.2	64.9	2.75	2.75	1
FA9W10-6012R	13.3	65.2	3.25	3.25	3
MT1078	11.8	62.6	5.38	5.26	5
MT1090	12.0	63.0	6.75	6.75	5
SD08080	12.3	64.3	3.50	3.50	3
SD08200	12.2	64.2	4.88	4.88	4
SD09113	12.1	61.7	2.88	2.88	2
SD09118	11.8	61.6	3.13	3.06	2
SD09138	12.5	63.8	4.00	4.00	1
SD09192	12.3	63.5	5.13	5.13	3
SD09227	11.9	62.7	3.00	2.95	2
SD10257-2	12.3	63.4	1.88	1.88	0
SD10W153	11.6	61.2	3.38	3.20	3
SD110060-9	11.9	62.9	4.75	4.71	4

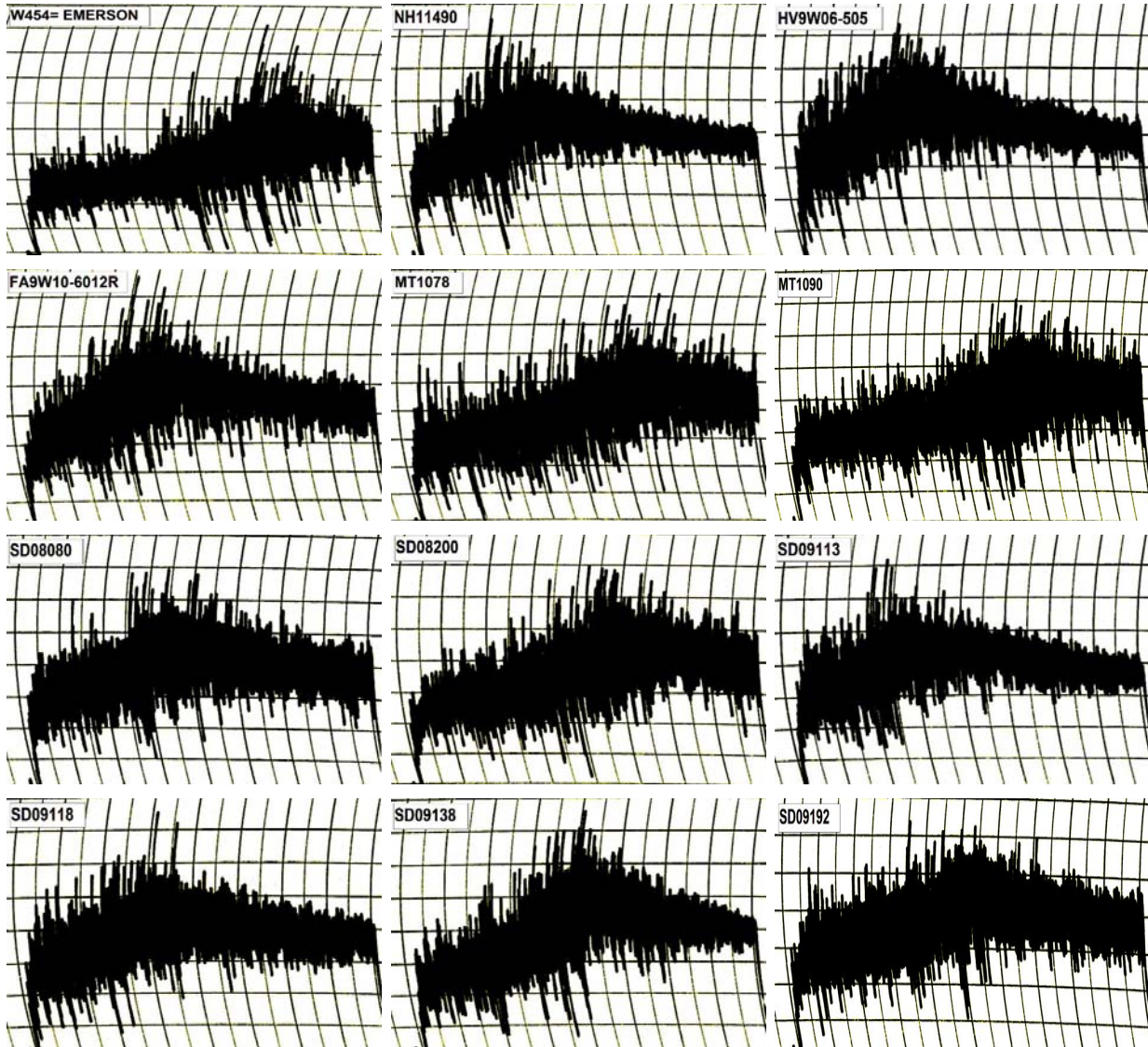
2014 NRPN Intraregional Production Zone Northern Plains



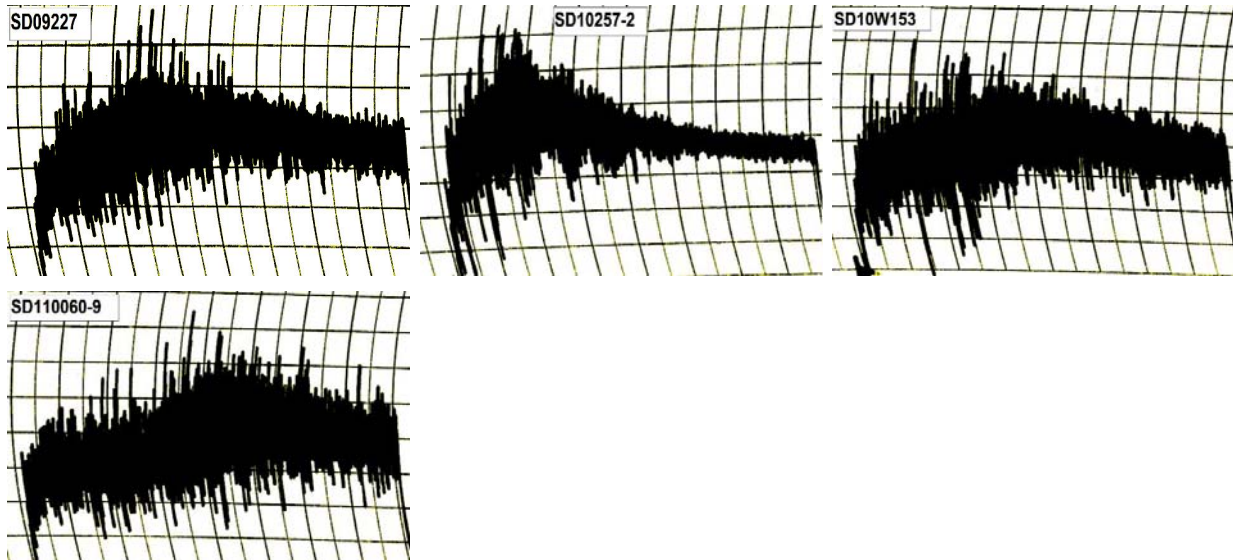
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Northern Plains

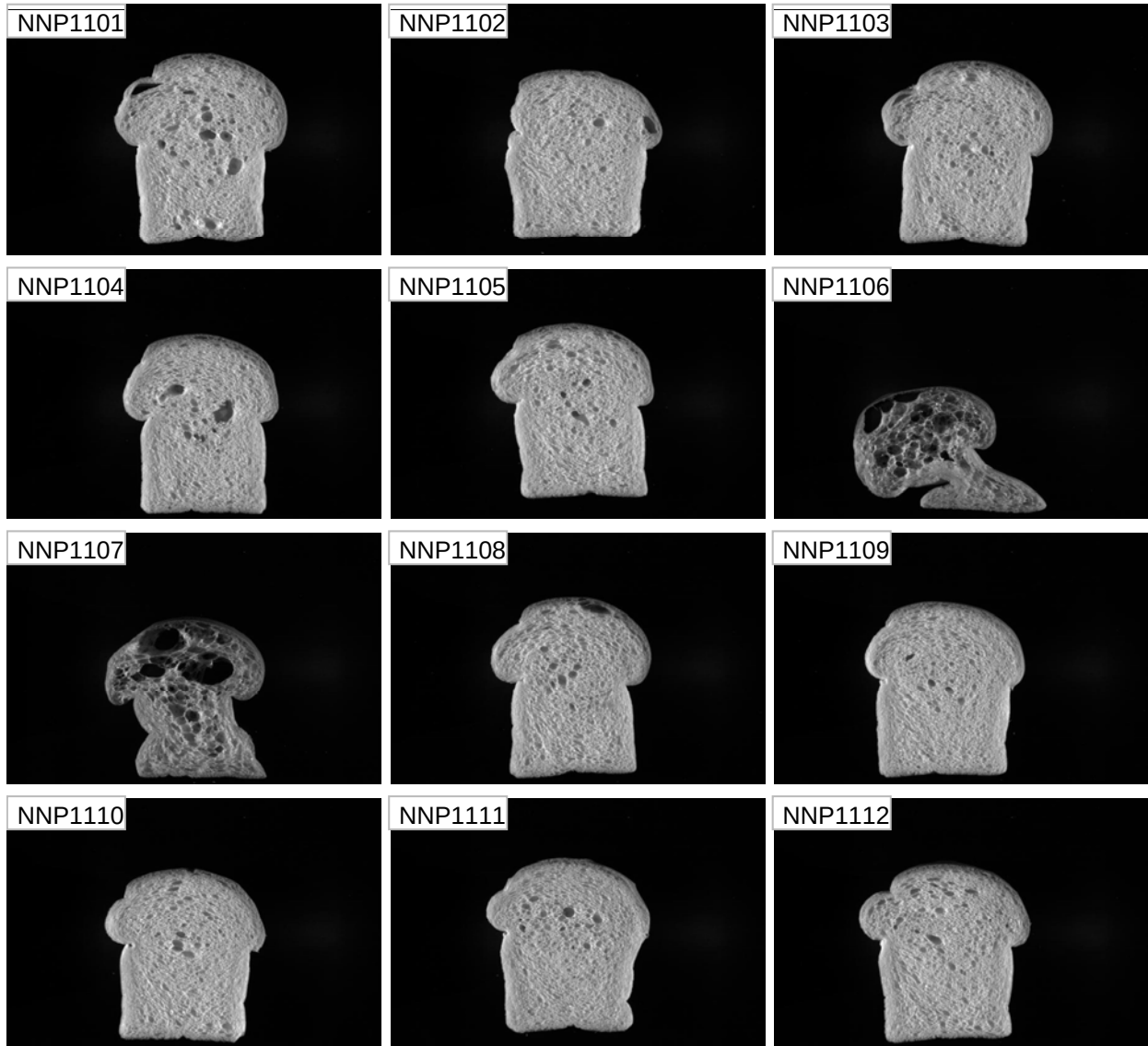
Line	RVA						
	Stirring Number (RVU)	Peak Viscosity (RVU)	Trough Viscosity (RVU)	Breakdown (RVU)	Final Viscosity (RVU)	Set back (RVU)	Peak Time (min)
Kharkof	137.42	246.42	155.58	90.83	278.42	122.83	6.27
Overland	134.50	229.92	149.50	80.42	272.75	123.25	6.20
Wesley	130.08	219.08	140.17	78.92	265.92	125.75	6.13
Jagalene	115.33	228.17	142.42	85.75	266.50	124.08	6.20
Jerry	134.08	207.83	134.67	73.17	254.92	120.25	6.20
NX04Y2107W	65.25	81.50	14.33	67.17	21.50	7.17	3.40
NX11MD2337	88.42	98.25	31.75	66.50	45.75	14.00	3.67
N11MD2129W	118.08	263.25	151.08	112.17	259.50	108.42	6.20
N11MD2157W	134.17	230.75	143.58	87.17	267.08	123.50	6.20
N11MD2166W	134.25	240.17	148.75	91.42	274.92	126.17	6.27
N11MD2172	119.50	260.67	148.67	112.00	278.42	129.75	6.13
LCH11-147	133.17	230.67	153.00	77.67	274.58	121.58	6.33
LCH10-187	117.92	213.92	131.83	82.08	241.33	109.50	6.27
LCH11-1064	129.83	241.75	153.25	88.50	274.25	121.00	6.33
LCH09-06	121.00	246.08	152.50	93.58	279.50	127.00	6.27
LCH13NEDH-14-53	129.75	249.08	141.25	107.83	250.58	109.33	6.20
NE10507	134.58	283.92	164.08	119.83	264.17	100.08	6.33
NE10589	132.25	232.00	153.33	78.67	279.08	125.75	6.33
NHH11569	132.50	242.17	165.83	76.33	299.42	133.58	6.20
NI09710H	131.92	214.67	134.25	80.42	256.17	121.92	6.13
NW09627	117.08	230.42	132.50	97.92	255.17	122.67	6.07
NI10718W	130.42	228.50	145.92	82.58	272.75	126.83	6.20
NE10683	120.58	211.50	116.75	94.75	221.83	105.08	6.07
W434 = Flourish	129.08	242.92	142.42	100.50	256.58	114.17	6.20
W454 = Emerson	105.92	213.67	125.58	88.08	229.42	103.83	6.20
NH11490	143.25	218.42	157.67	60.75	292.75	135.08	6.27
HV9W06-505	133.33	235.33	151.92	83.42	273.50	121.58	6.27
FA9W10-6012R	148.83	242.00	169.17	72.83	289.25	120.08	6.47
MT1078	127.33	257.67	164.83	92.83	300.67	135.83	6.27
MT1090	137.17	254.58	160.42	94.17	291.17	130.75	6.33
SD08080	142.00	239.08	160.08	79.00	282.42	122.33	6.33
SD08200	129.75	216.58	142.58	74.00	266.67	124.08	6.20
SD09113	130.17	243.67	155.42	88.25	278.08	122.67	6.27
SD09118	125.75	239.92	154.42	85.50	283.33	128.92	6.27
SD09138	120.25	223.42	141.00	82.42	269.58	128.58	6.13
SD09192	124.58	244.83	152.83	92.00	280.25	127.42	6.33
SD09227	137.75	214.33	135.00	79.33	256.83	121.83	6.20
SD10257-2	133.50	236.58	157.75	78.83	292.08	134.33	6.27
SD10W153	122.83	238.50	133.25	105.25	244.58	111.33	6.27
SD110060-9	137.08	247.25	156.25	91.00	280.92	124.67	6.27

2014 NRPN Intraregional Production Zone

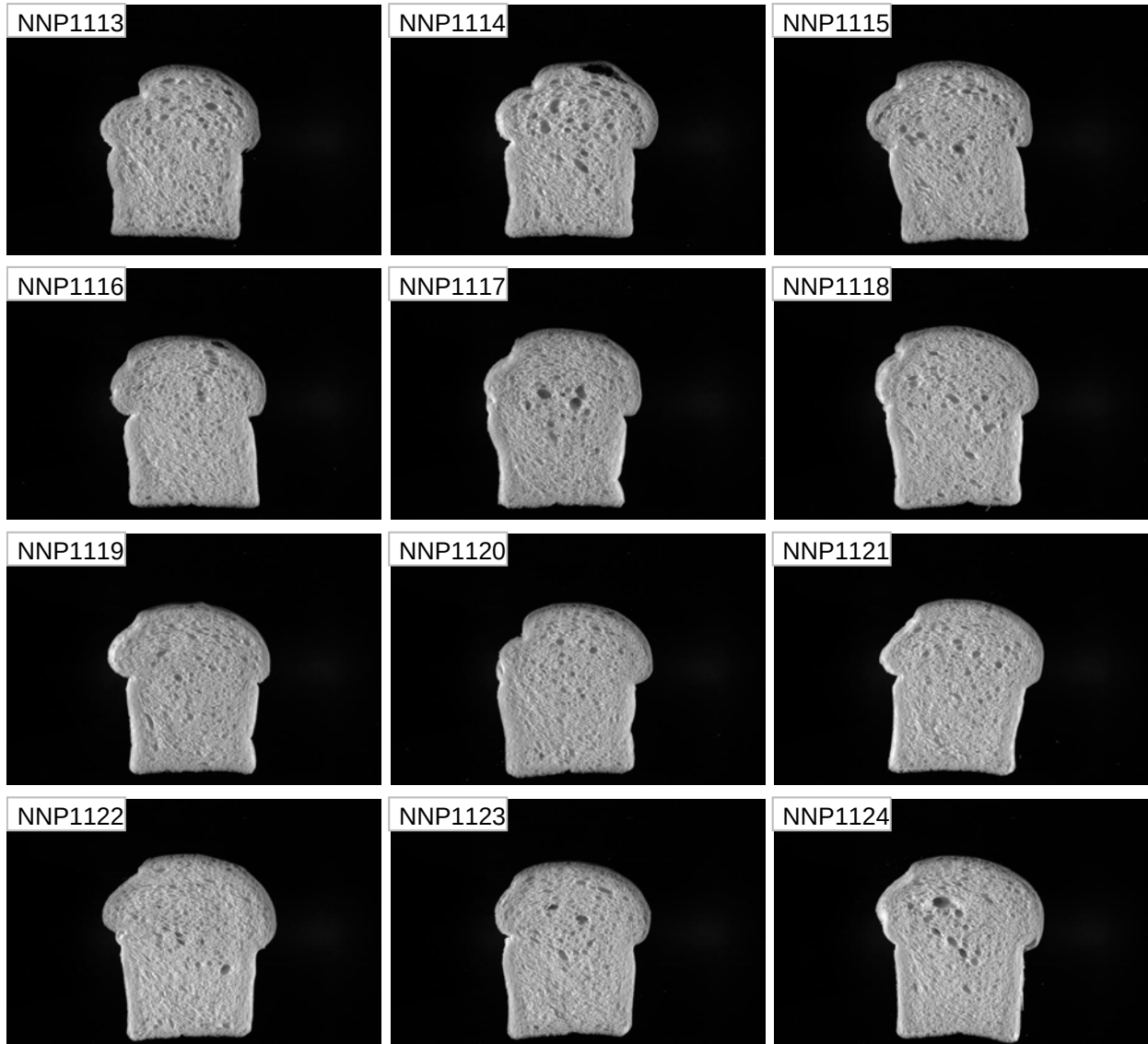
Northern Plains

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	13.3	63.4	5.00	5.00	172.8	7.7	3.0	960	6.3	64
Overland	11.9	61.9	2.75	2.71	171.4	7.3	3.0	820	5.4	59
Wesley	13.3	64.0	5.25	5.25	173.2	7.7	3.5	985	6.7	67
Jagalene	12.2	63.4	4.50	4.50	173.2	7.5	3.0	920	6.1	67
Jerry	12.6	63.0	4.50	4.50	172.7	7.6	3.0	885	6.0	61
NX04Y2107W	12.5	65.7	3.75	3.75	176.0	7.7	0.0	1040	6.9	78
NX11MD2337	12.8	65.9	4.63	4.63	175.5	7.5	0.0	1025	6.9	74
N11MD2129W	12.3	64.2	4.63	4.63	173.4	7.6	4.0	950	6.4	70
N11MD2157W	12.4	62.8	5.50	5.50	172.4	7.4	4.5	895	6.0	63
N11MD2166W	11.4	62.1	5.50	5.11	171.4	7.3	4.5	840	5.7	64
N11MD2172	11.6	62.5	8.50	8.08	171.5	7.4	4.0	865	5.9	66
LCH11-147	13.1	62.0	3.13	3.13	172.2	7.6	3.0	940	6.4	64
LCH10-187	12.5	62.5	2.50	2.50	172.5	7.3	2.0	885	5.9	62
LCH11-1064	12.2	62.9	3.00	3.00	173.0	7.5	1.0	905	6.0	66
LCH09-06	13.1	63.8	3.50	3.50	174.0	7.7	3.0	965	6.5	66
LCH13NEDH-14-53	11.7	63.1	4.00	3.87	169.8	7.3	3.5	895	6.1	68
NE10507	11.7	64.2	5.50	5.31	173.9	7.7	4.5	930	6.1	72
NE10589	12.5	64.2	4.75	4.75	173.9	7.5	5.0	925	6.1	66
NHH11569	12.5	63.9	3.50	3.50	173.7	7.2	4.0	855	5.6	58
NI09710H	11.3	60.1	3.13	2.87	169.6	7.6	3.0	850	5.8	66
NW09627	11.1	61.5	3.75	3.34	171.0	7.4	5.0	885	6.0	72
NI10718W	11.4	62.1	6.00	5.57	171.8	7.6	5.0	925	6.3	74
NE10683	11.4	62.0	4.50	4.16	171.7	7.6	4.5	890	6.0	70
W434 = Flourish	12.1	64.6	5.25	5.25	171.4	7.5	5.0	940	6.3	71
W454 = Emerson	12.9	63.3	9.13	9.13	172.8	7.7	5.0	1070	7.2	78
NH11490	12.5	63.2	3.75	3.75	172.8	7.5	4.5	895	6.0	63
HV9W06-505	13.2	64.4	3.25	3.25	174.2	7.6	4.0	925	6.2	61
FA9W10-6012R	13.3	64.9	4.00	4.00	174.7	7.6	4.0	1015	6.8	69
MT1078	11.8	63.1	7.75	7.58	174.3	7.6	4.0	940	6.4	73
MT1090	12.0	63.2	9.88	9.88	172.2	7.5	4.0	925	6.3	69
SD08080	12.3	64.4	4.50	4.50	174.1	7.5	4.5	930	6.2	68
SD08200	12.2	64.4	7.00	7.00	172.4	7.6	4.5	935	6.3	69
SD09113	12.1	61.1	3.50	3.50	170.5	7.3	2.5	850	5.8	60
SD09118	11.8	61.2	4.25	4.15	171.2	7.6	2.5	900	6.1	68
SD09138	12.5	63.6	5.00	5.00	173.1	7.5	3.5	905	6.1	63
SD09192	12.3	63.1	6.13	6.13	172.5	7.6	5.0	955	6.4	70
SD09227	11.9	61.4	4.25	4.17	170.9	7.3	2.0	830	5.5	60
SD10257-2	12.3	60.5	2.38	2.38	170.3	7.2	1.5	810	5.3	55
SD10W153	11.6	62.4	4.00	3.79	171.6	7.3	3.0	860	5.8	65
SD110060-9	11.9	63.3	6.13	6.08	172.4	7.4	4.0	905	6.0	68

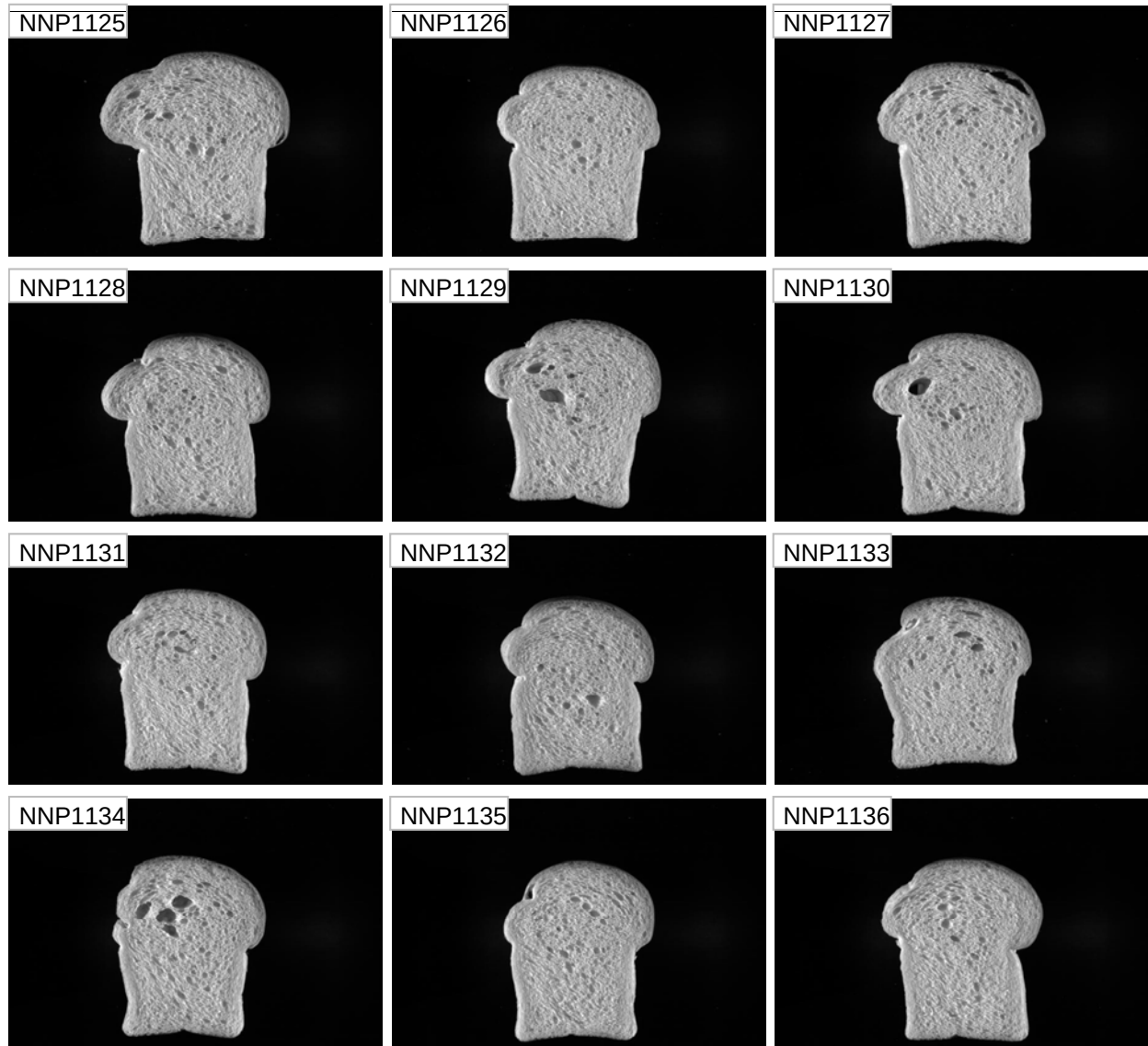
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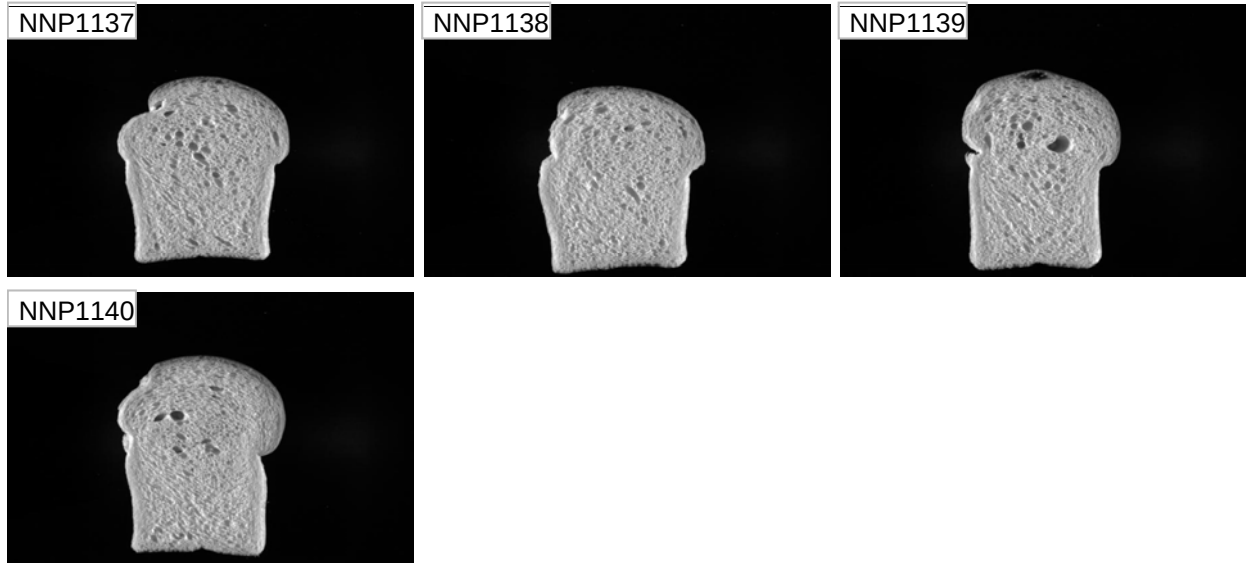
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Southern Regional Performance Nursery



Hard Winter Wheat Quality Database

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2014 SRPN-NHP

List of Entries

Entry	ID (Name)	Pedigree
1	Kharkof	Landrace
2	Scout 66	composite of 85 selections from Scout, Cltr 13546
3	TAM 107	TAM 105*4/Amigo
4	Jagalene	Abilene/Jagger
5	KS10HW78-1-1	KS03HW12-1/KS01HW152-6
6	KS11HW39-5	KS04HW101-3(98HW423(JGR/93HW242)/98HW170(ARL/WGRC15))
7	KS11HW39-6	KS04HW101-3(98HW423(JGR/93HW242)/98HW170(ARL/WGRC15))
8	CO09W040-F1	Danby/CO970547-7
9	CO09W009	KS02HW91/Ripper//Platte
10	CO11D174	TAM 112/Byrd
11	CO11D346	CO050173/Cowboy
12	CO11D446	CO050270/Byrd
13	OK09125	TAM 303/Overley
14	OK1059060	OK01307/Fuller
15	OK09520	TAM 303/2*OK96717-99-6756
16	OK10126	OK Bullet/OK98680reseln
17	OK10728W	OK Rising/OK98G508W-2-49
18	OK10805W	W-D97-6740/KS98HW151-6//OK98G502W-22
19	LCH11-1064	T158/T153
20	LCS Pistol	T158/T157
21	LCH11-109	SX1406W/00F5-22-1 (Bulk Sel)//KS00F5-20-3-2 (Bulk Sel)
22	LCH10-187	B88/2180//T81-1
23	LCH09-06	Provinciale/Vision10
24	KanMark	PRL/2*PASTOR//G980129W/3/KS970104-3-13
25	KS050278M-1	OR1/Santa Fe/3/Overley*3/Amadina//KS990011~27
26	HotRod	Aspen/Everest//KS980554-12--9
27	KS061406-LN~15	Aspen/Everest//KS980554-12--9
28	KS061406-LN~26	Aspen/Everest//KS980554-12--9
29	NE10478	NI03418/Camelot
30	NE10507	McGill/Harry//NE87612 (=NWT//WRR*5/AGT/3/NE69441)
31	NE10589	OK98697/Jagalene//Camelot
32	NH11489	NH01023/WESLEY//NE00403
33	TX08A001249	TAM 112/TX98D1158
34	TX08V7313	TX97V5300/TAM 111
35	TX09A001194	TAM 112/TAM 303
36	TX09D1172	TAM 303/TAM 112
37	HV9W09-0746	OVERLEY/Hitch
38	HV9W09-0918	OK93P656/JGR-95X371A//TAM 111
39	N11MD2172	KS03HW155-2/N02Y5078//97x0850-16
40	N11MD2157W	Mace/SD98W175-1



Hard Winter Wheat Quality Report 2014 SRPN-NCP

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

ID	Milling Score	Rating	%	Baking Score	Rating	%	1RS	Trait Deficiencies
Kharkof	40.9	Very Poor	72.2	73.7	Very Good	100.0		6,
Scout 66	54.5	Very Good	96.2	65.0	Very Good	88.2		16,
TAM 107	48.7	Poor	85.9	68.2	Very Good	92.5	1AL	
Jagalene	55.7	Very Good	98.3	41.0	Very Poor	55.6		
KS10HW78-1-1	54.8	Very Good	96.6	50.4	Average	68.4		3,5,16,19,20,
KS11HW39-5	53.8	Good	94.9	61.7	Good	83.7		16,
KS11HW39-6	48.5	Poor	85.5	54.1	Good	73.4		16,18,
CO09W040-F1	50.0	Average	88.2	30.9	Very Poor	41.9		11,12,16,17,19,
CO09W009	50.0	Average	88.2	31.0	Very Poor	42.1		14,15,
CO11D174	48.8	Poor	86.0	55.3	Average	75.0		2,4,14,15,17,
CO11D346	46.3	Poor	81.7	59.1	Good	80.1		1,11,16,19,
CO11D446	50.5	Average	89.1	48.1	Average	65.2		4,14,15,
OK09125	54.7	Very Good	96.6	49.0	Average	66.5		5,16,
OK1059060	53.4	Good	94.2	42.9	Poor	58.2		
OK09520	52.9	Average	93.3	60.7	Good	82.4		6,14,15,
OK10126	53.7	Good	94.7	44.2	Poor	60.0		
OK10728W	55.4	Very Good	97.8	66.2	Very Good	89.9		
OK10805W	55.5	Very Good	97.9	51.8	Average	70.2		16,20,
LCH11-1064	45.8	Very Poor	80.8	41.8	Poor	56.7		3,12,17,21,
LCS Pistol	38.1	Very Poor	67.2	41.7	Poor	56.6		2,4,16,
LCH11-109	52.2	Average	92.1	29.5	Very Poor	40.1		16,19,20,
LCH10-187	46.4	Poor	81.9	43.1	Poor	58.5		
LCH09-06	53.2	Good	93.9	61.1	Good	82.9		16,
KanMark	53.5	Good	94.4	58.6	Good	79.6		2,9,14,15,
KS050278M-1	48.0	Poor	84.6	41.8	Very Poor	56.7		2,8,16,
HotRod	44.6	Very Poor	78.7	69.4	Very Good	94.2		8,
KS061406-LN~15	43.8	Very Poor	77.2	59.5	Good	80.7		3,5,8,9,10,
KS061406-LN~26	45.0	Very Poor	79.5	35.7	Very Poor	48.5		8,9,16,20,
NE10478	50.0	Average	88.3	67.1	Very Good	91.0		3,
NE10507	46.2	Very Poor	81.5	69.2	Very Good	93.9		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 2014 SRPN-NCP

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

ID	Milling		Baking				Trait	
	Score	Rating	%	Score	Rating	% 1RS	Deficiencies	
NE10589	52.7	Average	93.0	63.6	Very Good	86.3		
NH11489	53.2	Good	93.8	44.1	Poor	59.9		
TX08A001249	49.3	Average	87.0	42.9	Very Poor	58.2 1AL	5,14,15,	
TX08V7313	48.7	Poor	85.9	49.1	Average	66.6	10,	
TX09A001194	48.6	Poor	85.7	50.5	Average	68.5	10,	
TX09D1172	56.7	Very Good	100.0	50.1	Average	68.0		
HV9W09-0746	54.0	Good	95.2	45.8	Poor	62.1	12,13,16,17,21,	
HV9W09-0918	54.4	Very Good	96.0	33.5	Very Poor	45.4	11,12,13,16,19,21,	
N11MD2172	53.5	Good	94.5	48.2	Poor	65.4	14,15,	
N11MD2157W	42.0	Very Poor	74.0	59.0	Good	80.0	1,2,4,14,15,	

2014 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	59.8	12.4	0.4	29.9	8.1	2.60	0.32	36 21	MIXED	54--17--15--14--03	
Scout 66	60.4	12.9	0.4	31.3	8.9	2.63	0.33	50 16	MIXED	12--28--32--28--03	
TAM107	58.6	12.9	0.5	32.0	8.2	2.67	0.34	55 17	HARD	10--20--28--42--02	
Jagalene	60.1	13.0	0.4	32.2	8.1	2.73	0.34	64 16	HARD	02--12--25--61--01	
KS10HW78-1-1	60.1	13.1	0.3	31.9	10.0	2.69	0.40	58 15	HARD	05--15--33--47--01	
KS11HW39-5	59.8	13.3	0.4	31.5	7.6	2.61	0.31	51 17	MIXED	16--25--29--30--03	
KS11HW39-6	59.3	13.0	0.4	31.1	9.2	2.60	0.35	49 18	MIXED	19--25--30--26--03	
CO09W040-F1	59.5	12.7	0.4	31.1	9.3	2.57	0.34	43 17	MIXED	24--36--27--13--03	
CO09W009	60.5	13.0	0.3	31.6	9.4	2.59	0.37	51 17	MIXED	16--22--28--34--03	
CO11D174	58.8	13.0	0.3	27.8	8.5	2.51	0.34	55 17	HARD	10--19--32--39--02	
CO11D346	57.6	13.0	0.4	30.1	8.9	2.56	0.34	47 18	MIXED	23--26--23--28--03	
CO11D446	59.4	12.7	0.4	29.1	9.3	2.48	0.33	54 17	HARD	08--29--29--34--02	
OK09125	59.0	12.4	0.5	31.9	9.0	2.72	0.38	52 15	HARD	10--25--32--33--02	
OK1059060	60.2	12.5	0.4	32.5	8.0	2.69	0.31	54 15	HARD	07--22--38--33--02	
OK09520	59.2	12.2	0.4	32.4	8.8	2.64	0.37	39 16	MIXED	38--33--17--12--03	
OK10126	60.6	12.5	0.5	31.6	9.1	2.73	0.37	70 14	HARD	01--02--19--78--01	
OK10728W	59.8	12.4	0.4	30.4	8.2	2.63	0.35	55 16	HARD	08--22--35--35--02	
OK10805W	60.6	12.6	0.4	31.3	8.1	2.67	0.33	64 16	HARD	02--09--27--62--01	
LCH11-1064	59.7	12.5	0.4	32.0	9.8	2.61	0.37	62 18	HARD	05--11--24--60--01	
LCH11-1130	58.8	12.3	0.4	26.7	8.4	2.49	0.34	45 23	MIXED	30--18--22--30--03	
LCH11-109	59.3	12.5	0.5	30.1	7.8	2.63	0.34	72 17	HARD	02--05--13--80--01	
LCH10-187	60.0	12.6	0.4	30.4	9.2	2.58	0.35	58 18	HARD	06--17--32--45--02	
LCH09-06	58.8	12.2	0.4	31.3	8.4	2.64	0.34	56 19	HARD	09--22--28--41--02	
KS030887K-6	60.1	12.4	0.4	27.6	8.4	2.56	0.35	66 16	HARD	02--08--19--71--01	
KS050278M-1	59.7	12.7	0.5	26.7	7.2	2.56	0.30	69 16	HARD	01--08--14--77--01	
KS061406-LN~37	58.9	12.7	0.5	31.9	9.0	2.70	0.34	76 17	HARD	01--04--10--85--01	
KS061406-LN~15	58.8	12.8	0.5	31.7	9.8	2.68	0.39	77 19	HARD	02--03--11--84--01	
KS061406-LN~26	59.6	12.6	0.4	32.2	8.9	2.69	0.35	72 20	HARD	01--10--18--71--01	
NE10478	59.7	12.4	0.4	29.4	9.7	2.60	0.36	69 17	HARD	01--07--20--72--01	
NE10507	58.3	12.5	0.4	29.0	9.0	2.54	0.35	56 18	HARD	07--21--30--42--02	
NE10589	59.9	13.1	0.4	30.6	7.3	2.70	0.31	59 15	HARD	04--13--35--48--01	
NH11489	60.7	12.6	0.4	28.0	8.5	2.57	0.34	55 17	HARD	09--21--33--37--02	
TX08A001249	60.5	12.7	0.4	29.4	8.7	2.59	0.38	58 17	HARD	05--21--28--46--01	
TX08V7313	61.4	13.1	0.6	31.1	8.6	2.72	0.35	61 19	HARD	03--15--28--54--01	
TX09A001194	60.6	13.1	0.3	34.2	9.5	2.72	0.35	54 17	MIXED	11--20--32--37--03	
TX09D1172	61.1	12.9	0.4	33.1	9.0	2.73	0.36	59 17	HARD	07--15--27--51--02	
HV9W09-0746	59.6	12.9	0.5	30.3	7.3	2.61	0.31	59 16	HARD	05--15--30--50--01	
HV9W09-0918	59.1	13.2	0.4	30.8	8.0	2.61	0.32	55 16	HARD	09--19--30--42--02	
N11MD2172	59.9	13.0	0.5	28.7	7.5	2.59	0.31	57 17	HARD	07--19--29--45--02	
N11MD2157W	57.8	12.6	0.4	26.9	8.6	2.49	0.35	56 21	MIXED	17--13--20--50--03	

2014 SRPN Intraregional Production Zone

North Central Plains

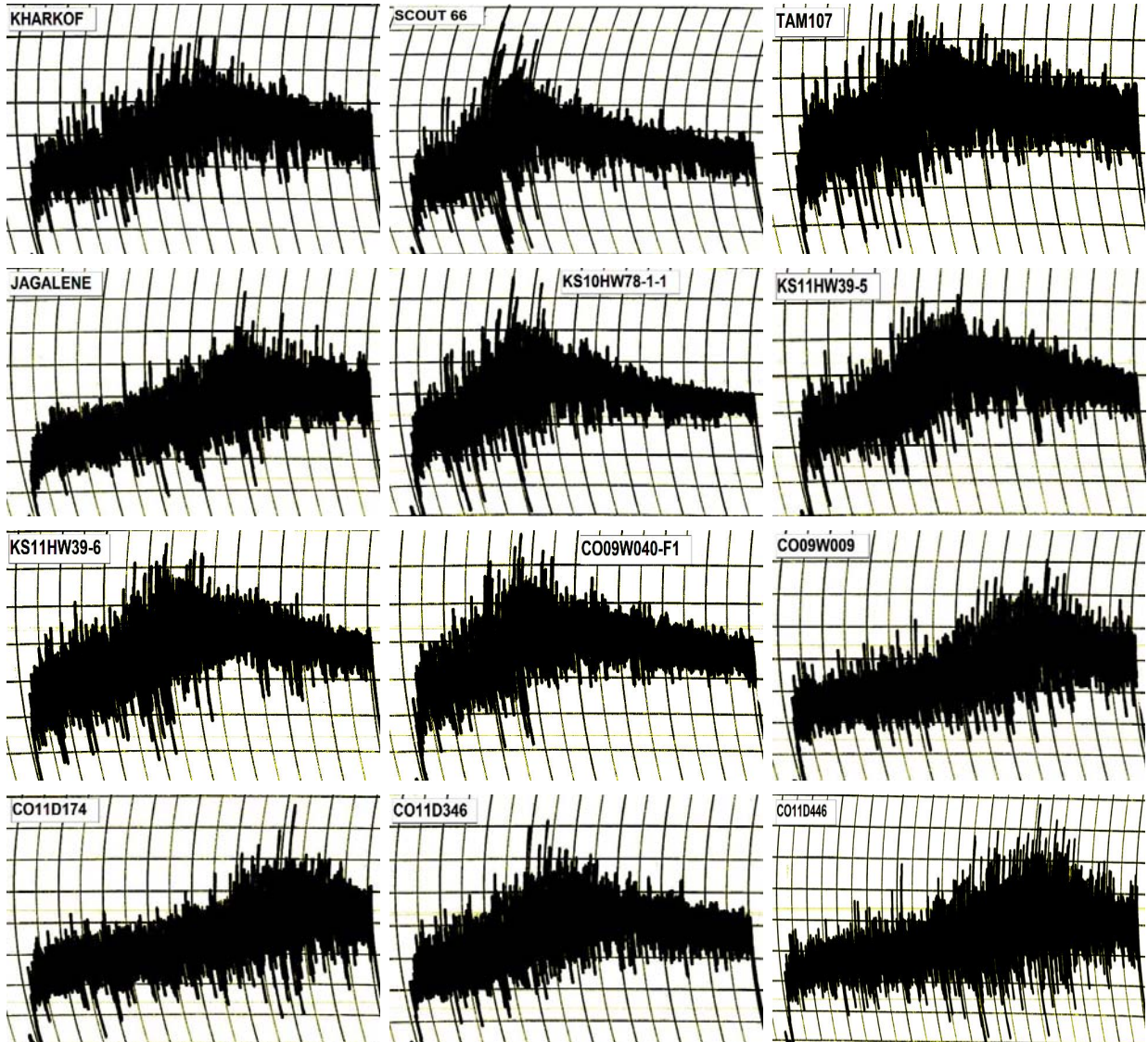
LINE	Wheat		Flour			Noodle Color					
	Protein	Milling Yield	Ash	Protein	PPO	L @ 0	a @ 0	b @ 0	Delta L 24 hrs	Delta a 24 hrs	Delta b 24 hrs
	(%)	(%)	(%)	(%)							
Kharkof	15.2	64.9	0.43	14.0	0.589	79.71	-1.99	22.97	-9.16	1.25	0.84
Scout 66	14.5	70.0	0.43	13.3	0.631	81.72	-1.76	20.34	-12.19	1.06	2.99
TAM107	13.4	66.5	0.42	11.9	0.664	81.00	-2.34	23.50	-8.32	1.36	1.11
Jagalene	13.8	68.8	0.47	12.7	0.615	80.13	-2.43	24.16	-8.57	1.40	-0.09
KS10HW78-1-1	13.9	70.2	0.45	12.5	0.706	79.88	-1.69	21.66	-10.18	1.41	1.43
KS11HW39-5	12.9	68.5	0.40	11.5	0.683	81.34	-2.22	22.20	-9.43	1.15	1.57
KS11HW39-6	13.1	67.6	0.40	11.6	0.693	81.26	-2.21	21.92	-8.07	1.03	1.81
CO09W040-F1	12.6	68.6	0.39	11.0	0.721	81.01	-2.34	22.98	-9.63	1.15	1.72
CO09W009	12.9	67.5	0.40	11.2	0.695	81.39	-2.15	22.70	-8.08	1.59	0.56
CO11D174	12.9	68.3	0.44	11.7	0.691	82.35	-1.83	20.53	-11.78	0.91	3.40
CO11D346	12.4	69.0	0.47	10.9	0.703	82.54	-2.12	22.67	-9.02	0.99	1.03
CO11D446	12.9	69.2	0.43	11.4	0.690	82.34	-1.98	21.56	-9.91	0.95	3.10
OK09125	14.3	69.9	0.40	12.7	0.660	81.32	-2.02	22.13	-10.73	1.00	2.43
OK1059060	14.2	67.4	0.45	12.6	0.752	81.05	-1.88	22.05	-9.84	0.79	1.90
OK09520	13.2	70.1	0.40	11.9	0.689	82.57	-2.10	22.64	-9.44	0.79	1.41
OK10126	14.6	67.1	0.46	13.1	0.594	79.30	-1.56	22.76	-8.73	1.39	-0.51
OK10728W	13.9	69.6	0.41	12.7	0.573	80.07	-2.10	23.33	-8.37	1.43	1.15
OK10805W	14.1	68.6	0.46	12.6	0.605	80.23	-1.95	22.32	-8.74	1.52	0.19
LCH11-1064	13.3	65.8	0.47	12.0	0.646	80.01	-2.00	24.26	-11.00	2.24	-0.42
LCH11-1130	13.4	64.9	0.40	12.3	0.662	81.96	-2.33	22.61	-9.09	1.33	0.59
LCH11-109	13.6	67.3	0.46	12.1	0.594	79.57	-2.01	24.69	-9.82	1.44	0.75
LCH10-187	13.4	66.0	0.44	12.0	0.705	80.28	-1.92	22.59	-10.27	1.26	2.50
LCH09-06	14.2	69.8	0.41	13.0	0.675	79.93	-1.57	20.85	-11.37	1.35	2.76
KS030887K-6	13.7	69.6	0.49	12.4	0.741	80.88	-2.25	23.54	-10.21	1.30	0.56
KS050278M-1	14.2	64.7	0.46	13.1	0.714	80.33	-2.09	22.41	-9.90	0.91	1.17
KS061406-LN~37	13.6	62.7	0.47	12.4	0.600	79.02	-1.47	23.54	-10.29	1.23	2.19
KS061406-LN~15	13.7	64.7	0.51	12.6	0.604	78.42	-1.25	23.61	-10.67	1.17	1.75
KS061406-LN~26	13.7	64.7	0.50	12.6	0.621	78.92	-1.51	24.08	-10.36	1.20	1.62
NE10478	13.7	67.8	0.46	12.7	0.638	79.78	-0.90	20.46	-9.00	0.92	0.98
NE10507	13.3	67.0	0.43	12.0	0.752	80.22	-1.54	22.76	-9.42	1.10	0.82
NE10589	13.3	66.6	0.45	11.9	0.704	81.86	-1.67	20.84	-8.30	1.10	0.86
NH11489	13.6	69.5	0.43	12.5	0.737	81.46	-2.09	22.75	-8.65	0.79	1.20
TX08A001249	13.6	66.6	0.40	12.2	0.706	81.36	-1.29	20.64	-10.09	0.62	2.92
TX08V7313	13.7	66.4	0.48	11.8	0.788	81.10	-1.88	22.84	-11.01	0.93	3.07
TX09A001194	13.9	66.3	0.46	12.2	0.737	81.05	-1.40	21.47	-10.81	0.97	2.83
TX09D1172	14.5	69.4	0.41	13.3	0.589	80.08	-1.54	23.23	-12.09	1.21	2.59
HV9W09-0746	13.3	68.8	0.48	11.9	0.751	79.88	-1.80	24.82	-11.08	1.27	1.72
HV9W09-0918	12.9	69.3	0.43	10.9	0.562	80.21	-1.52	22.14	-9.33	0.94	2.18
N11MD2172	13.4	68.6	0.43	12.0	0.617	82.25	-1.84	21.33	-10.77	1.02	2.93
N11MD2157W	13.5	66.9	0.46	11.8	0.646	81.19	-1.62	23.14	-8.75	0.75	1.42

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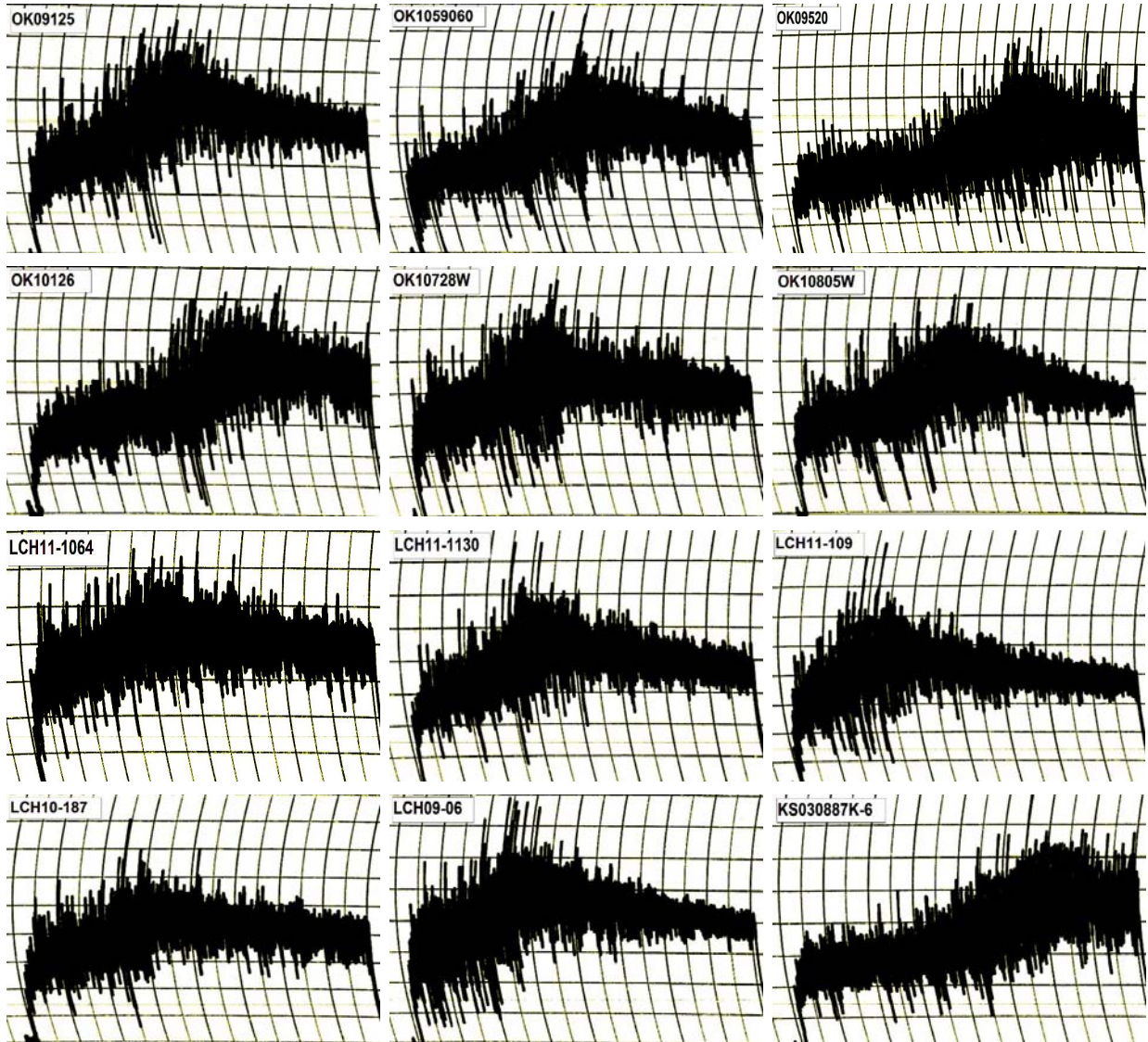
North Central Plains

	Flour Protein	Mixograph			
		Absorption	As-Is	Corrected	Tolerance
Line	(%)	(%)	(min)	(min)	
Kharkof	14.0	65.2	4.13	4.13	4
Scout 66	13.3	65.0	2.63	2.63	2
TAM107	11.9	61.7	3.25	3.20	4
Jagalene	12.7	63.1	5.13	5.13	4
KS10HW78-1-1	12.5	62.3	3.00	3.00	1
KS11HW39-5	11.5	62.1	3.63	3.41	2
KS11HW39-6	11.6	62.2	3.50	3.31	2
CO09W040-F1	11.0	61.2	2.88	2.52	2
CO09W009	11.2	61.6	5.50	4.99	5
CO11D174	11.7	61.4	6.38	6.13	4
CO11D346	10.9	61.2	3.63	3.16	2
CO11D446	11.4	61.4	8.63	8.00	4
OK09125	12.7	64.0	3.63	3.63	2
OK1059060	12.6	64.0	4.38	4.38	4
OK09520	11.9	62.3	6.63	6.58	4
OK10126	13.1	64.8	5.00	5.00	5
OK10728W	12.7	62.6	3.50	3.50	3
OK10805W	12.6	63.9	4.00	4.00	1
LCH11-1064	12.0	61.4	3.38	3.36	4
LCH11-1130	12.3	62.4	3.00	3.00	2
LCH11-109	12.1	63.2	2.38	2.38	1
LCH10-187	12.0	62.9	3.00	2.98	3
LCH09-06	13.0	62.6	3.00	3.00	1
KS030887K-6	12.4	62.6	6.38	6.38	4
KS050278M-1	13.1	63.8	3.00	3.00	2
KS061406-LN~37	12.4	63.6	4.00	4.00	4
KS061406-LN~15	12.6	63.8	3.50	3.50	3
KS061406-LN~26	12.6	64.0	2.75	2.75	2
NE10478	12.7	64.0	3.50	3.50	4
NE10507	12.0	63.0	4.50	4.50	4
NE10589	11.9	62.8	4.88	4.81	4
NH11489	12.5	63.8	3.38	3.38	3
TX08A001249	12.2	63.3	5.38	5.38	5
TX08V7313	11.8	62.6	4.25	4.13	5
TX09A001194	12.2	63.3	4.63	4.63	5
TX09D1172	13.3	65.1	3.50	3.50	3
HV9W09-0746	11.9	60.3	4.13	4.10	2
HV9W09-0918	10.9	60.1	2.63	2.29	1
N11MD2172	12.0	61.9	5.88	5.86	4
N11MD2157W	11.8	62.6	6.50	6.35	5

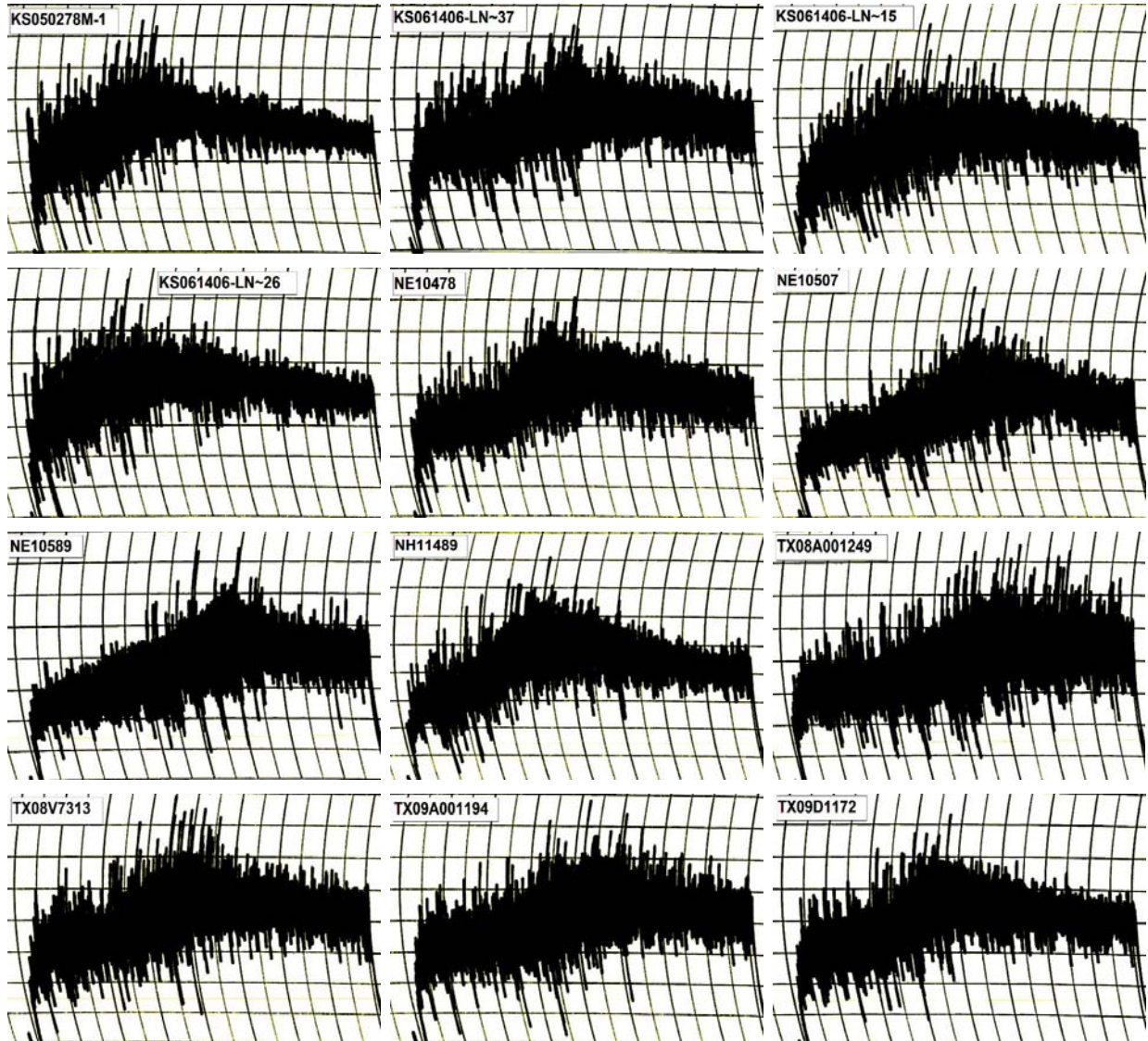
2014 SRPN Intraregional Production Zone North Central Plains



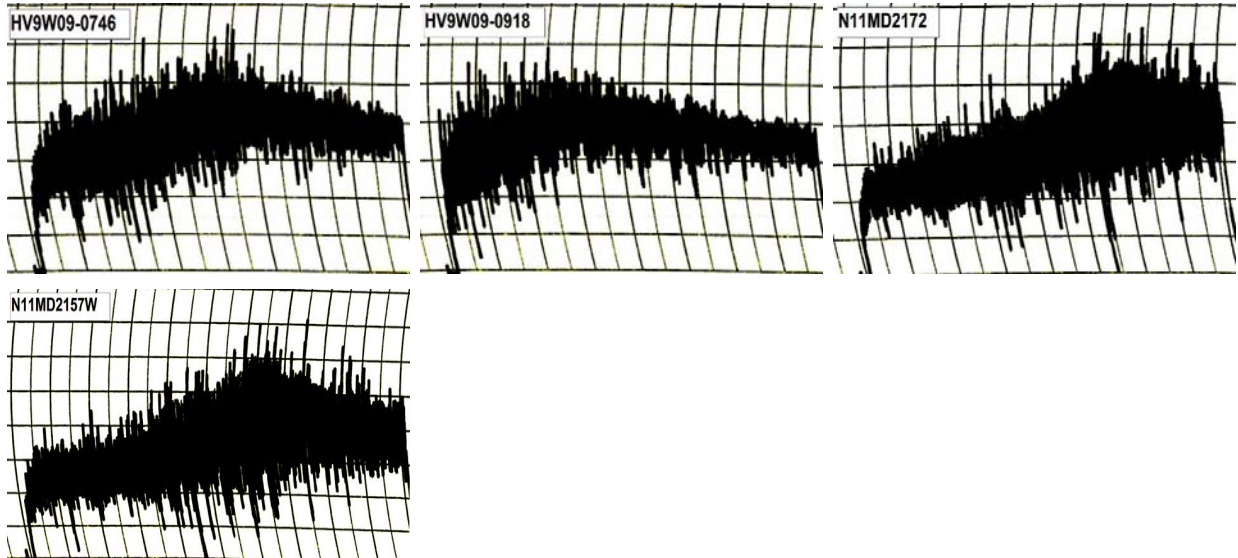
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Line	RVA						
	Stirring Number (RVU)	Peak Viscosity (RVU)	Trough Viscosity (RVU)	Breakdown (RVU)	Final Viscosity (RVU)	Set back (RVU)	Peak Time (min)
Kharkof	138.83	245.50	162.00	83.50	283.83	121.83	6.40
Scout 66	109.75	233.17	146.00	87.17	272.67	126.67	6.13
TAM107	130.00	288.83	184.25	104.58	319.92	135.67	6.40
Jagalene	114.67	242.67	153.58	89.08	284.75	131.17	6.20
KS10HW78-1-1	119.83	278.42	164.58	113.83	277.42	112.83	6.33
KS11HW39-5	111.58	241.08	138.33	102.75	253.67	115.33	6.13
KS11HW39-6	113.33	227.50	128.17	99.33	237.50	109.33	6.13
CO09W040-F1	99.17	269.92	146.00	123.92	256.25	110.25	6.27
CO09W009	119.42	235.00	138.50	96.50	259.25	120.75	6.13
CO11D174	97.75	278.08	163.92	114.17	296.25	132.33	6.27
CO11D346	123.08	244.33	148.50	95.83	286.75	138.25	6.13
CO11D446	109.17	260.42	149.58	110.83	281.25	131.67	6.07
OK09125	112.42	267.00	172.50	94.50	307.58	135.08	6.27
OK1059060	121.50	252.92	158.83	94.08	284.92	126.08	6.27
OK09520	96.17	265.42	160.17	105.25	289.33	129.17	6.20
OK10126	119.17	268.67	142.00	126.67	255.00	113.00	6.07
OK10728W	113.25	243.42	144.25	99.17	269.33	125.08	6.20
OK10805W	111.42	163.92	85.08	78.83	174.17	89.08	6.00
LCH11-1064	117.42	235.25	142.58	92.67	258.17	115.58	6.33
LCH11-1130	119.50	257.92	152.50	105.42	278.08	125.58	6.20
LCH11-109	132.92	237.42	143.50	93.92	268.92	125.42	6.13
LCH10-187	120.17	243.17	151.25	91.92	271.42	120.17	6.33
LCH09-06	117.00	244.67	153.92	90.75	278.92	125.00	6.27
KS030887K-6	125.92	236.83	148.58	88.25	273.42	124.83	6.20
KS050278M-1	141.58	258.83	171.83	87.00	300.33	128.50	6.40
KS061406-LN~37	131.42	248.58	157.42	91.17	281.50	124.08	6.33
KS061406-LN~15	128.50	222.42	133.42	89.00	251.58	118.17	6.20
KS061406-LN~26	137.42	232.25	142.50	89.75	259.42	116.92	6.27
NE10478	124.00	199.42	133.67	65.75	256.08	122.42	6.13
NE10507	127.75	278.58	154.58	124.00	275.75	121.17	6.33
NE10589	131.00	235.17	157.25	77.92	287.83	130.58	6.27
NH11489	133.17	248.75	168.67	80.08	298.33	129.67	6.27
TX08A001249	127.08	295.00	183.25	111.75	310.75	127.50	6.40
TX08V7313	129.50	264.00	168.25	95.75	298.58	130.33	6.33
TX09A001194	113.58	273.92	170.33	103.58	302.17	131.83	6.33
TX09D1172	114.33	226.75	132.33	94.42	247.83	115.50	6.13
HV9W09-0746	123.58	226.67	136.33	90.33	249.50	113.17	6.27
HV9W09-0918	103.67	235.83	139.75	96.08	262.50	122.75	6.13
N11MD2172	127.50	251.17	152.33	98.83	280.58	128.25	6.20
N11MD2157W	121.17	241.33	136.50	104.83	261.17	124.67	6.07

2014 SRPN Intraregional Production Zone

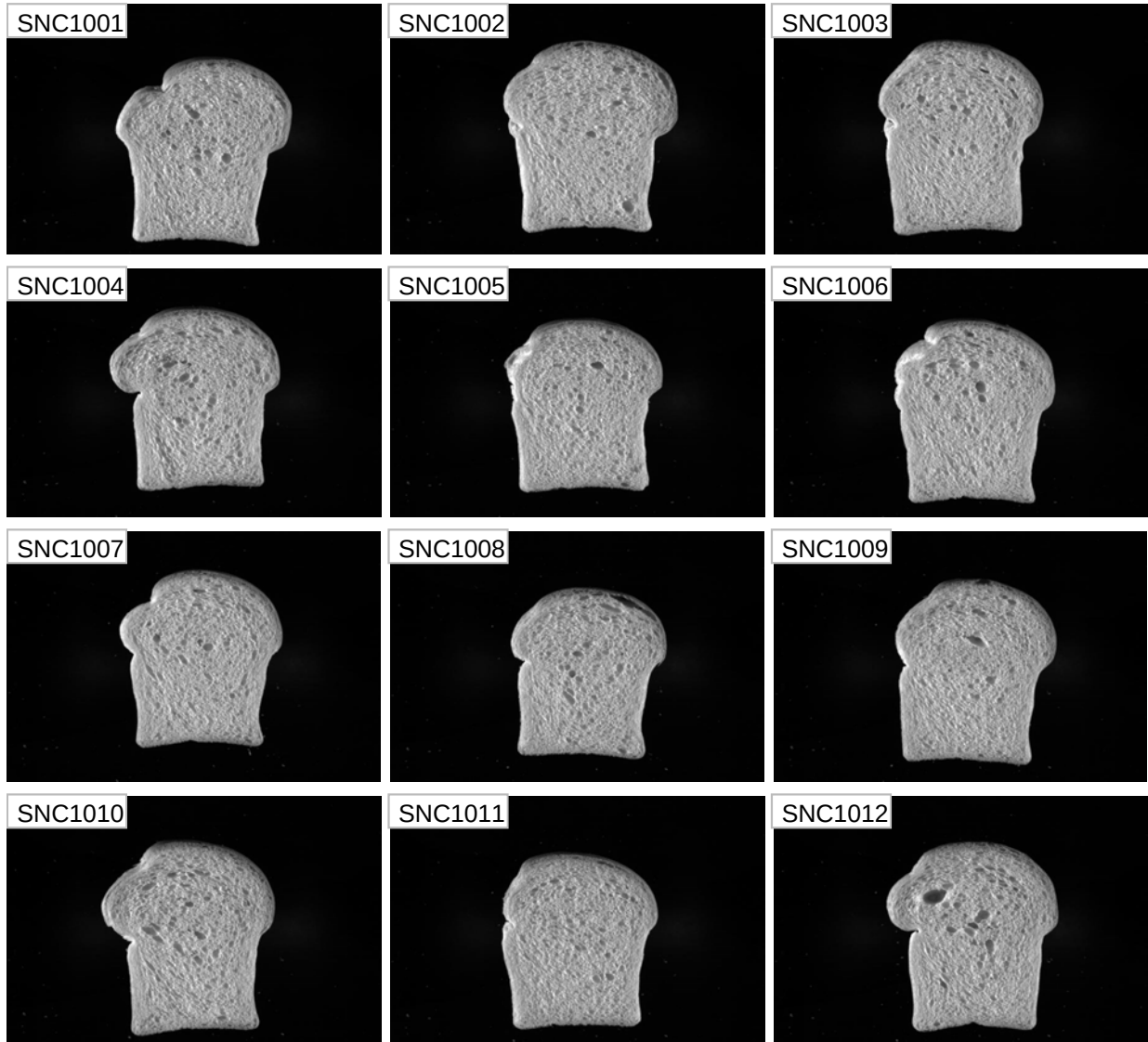
North Central Plains

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	14.0	64.1	5.00	5.00	174.4	8.2	5.0	1035	6.9	67
Scout 66	13.3	65.4	4.13	4.13	175.1	8.2	5.0	975	6.4	66
TAM107	11.9	62.5	4.88	4.81	171.3	7.8	5.0	1010	6.9	80
Jagalene	12.7	62.5	6.63	6.63	171.6	7.8	4.5	1000	6.8	72
KS10HW78-1-1	12.5	62.3	4.13	4.13	172.1	7.6	4.0	875	5.9	60
KS11HW39-5	11.5	62.4	4.50	4.23	172.3	7.7	5.0	935	6.3	75
KS11HW39-6	11.6	62.6	4.63	4.38	172.3	7.1	4.0	895	6.1	69
CO09W040-F1	11.0	60.6	3.75	3.28	170.0	7.5	3.5	860	5.9	70
CO09W009	11.2	61.4	8.00	7.25	170.5	7.6	5.5	930	6.4	76
CO11D174	11.7	61.3	7.75	7.44	170.2	7.6	5.0	1025	7.1	84
CO11D346	10.9	64.5	5.50	4.79	174.1	7.5	5.0	875	5.8	72
CO11D446	11.4	62.8	14.00	12.98	171.4	7.8	4.0	975	6.7	80
OK09125	12.7	64.2	4.50	4.50	173.5	7.9	4.5	1015	6.9	74
OK1059060	12.6	64.4	6.38	6.38	173.6	7.7	5.5	950	6.3	68
OK09520	11.9	62.3	10.00	9.92	170.7	7.8	6.0	1025	7.0	81
OK10126	13.1	64.6	7.25	7.25	174.1	7.8	4.5	1025	6.8	72
OK10728W	12.7	64.4	4.13	4.13	174.3	7.7	5.0	985	6.5	71
OK10805W	12.6	63.6	4.88	4.88	173.4	7.6	3.0	895	5.9	62
LCH11-1064	12.0	60.6	4.00	3.98	170.1	7.5	1.5	980	6.6	76
LCH11-1130	12.3	62.1	4.00	4.00	171.7	7.8	3.5	985	6.6	74
LCH11-109	12.1	62.6	3.13	3.13	172.3	7.5	3.5	850	5.6	60
LCH10-187	12.0	62.5	3.75	3.73	172.0	7.7	4.5	1005	6.7	79
LCH09-06	13.0	63.2	3.63	3.63	173.2	7.7	5.0	985	6.6	68
KS030887K-6	12.4	62.2	8.75	8.75	171.3	7.8	5.0	1075	7.3	82
KS050278M-1	13.1	63.6	3.13	3.13	173.4	7.9	4.5	1005	6.7	70
KS061406-LN~37	12.4	65.3	5.38	5.38	175.4	8.1	5.0	975	6.5	72
KS061406-LN~15	12.6	65.3	4.38	4.38	174.8	7.6	4.0	915	6.1	64
KS061406-LN~26	12.6	63.6	3.50	3.50	173.3	7.6	3.5	890	5.9	61
NE10478	12.7	63.2	4.25	4.25	173.1	7.9	5.0	980	6.6	70
NE10507	12.0	64.4	7.25	7.25	173.8	7.8	6.0	1035	6.9	81
NE10589	11.9	63.4	6.88	6.79	174.6	7.7	6.0	950	6.3	73
NH11489	12.5	63.7	4.25	4.25	173.3	8.0	4.5	950	6.4	69
TX08A001249	12.2	65.1	8.00	8.00	174.2	8.1	5.5	1060	7.2	83
TX08V7313	11.8	64.0	5.50	5.34	173.3	7.9	4.5	1005	6.8	80
TX09A001194	12.2	63.4	5.50	5.50	172.8	7.9	4.5	1050	7.1	81
TX09D1172	13.3	64.0	4.50	4.50	173.6	7.7	5.5	1025	6.9	71
HV9W09-0746	11.9	60.4	4.75	4.72	170.0	7.5	2.0	960	6.5	74
HV9W09-0918	10.9	60.5	3.25	2.83	170.6	7.6	2.0	870	5.8	72
N11MD2172	12.0	62.5	7.63	7.61	171.4	7.6	4.0	960	6.4	74
N11MD2157W	11.8	63.6	10.63	10.38	172.4	7.6	6.0	960	6.4	75

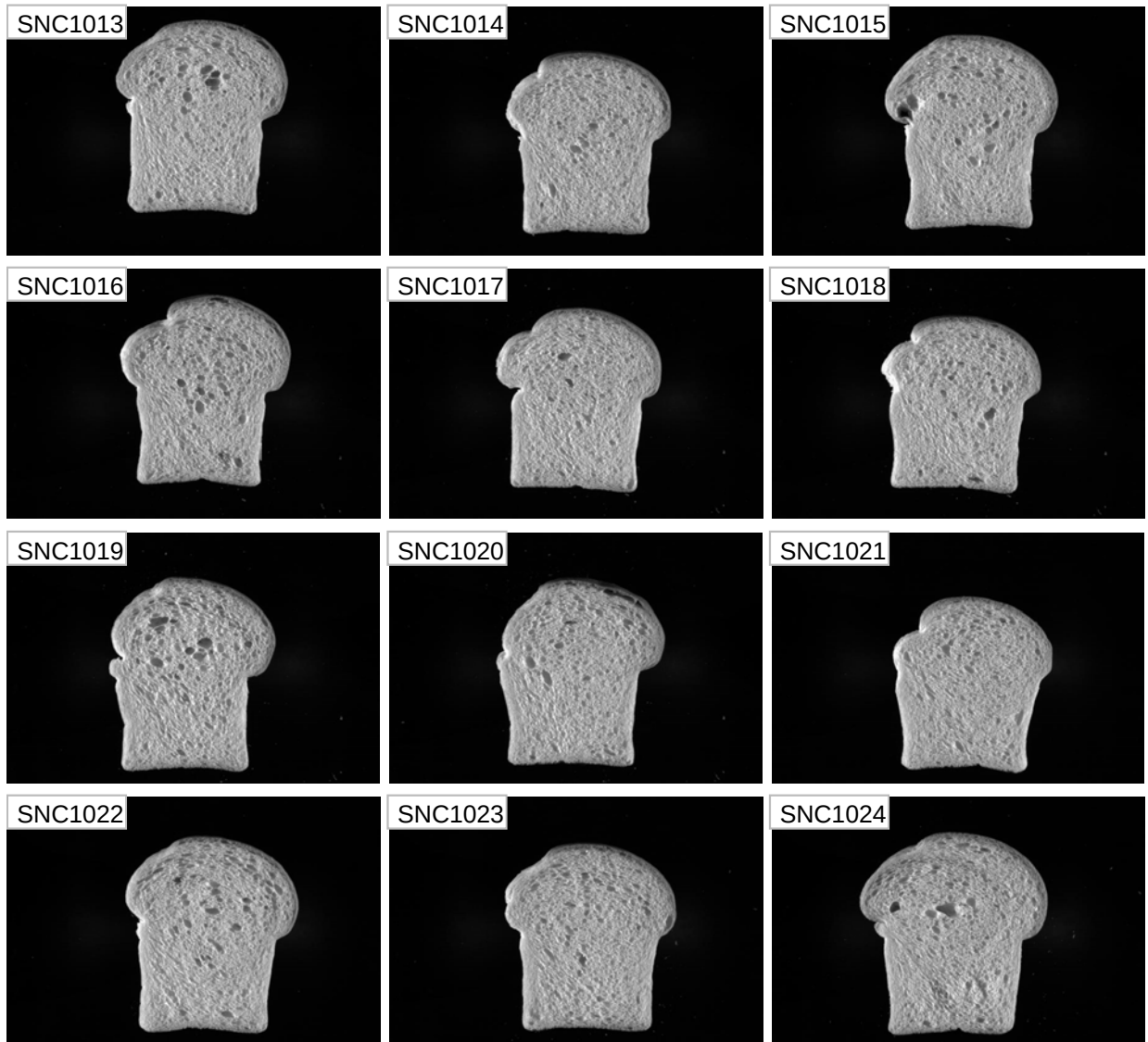
LIST of SRPN SAMPLE ID for C-CELL IMAGES

Entry	Breeder ID	HWWQL ID			
		North Central Plains	Northern High Plains	South Central Plains	Southern High Plains
1	Kharkof	14-SNC1001	14-SNH1001	14-SSC1001	14-SSH1001
2	Scout 66	14-SNC1002	14-SNH1002	14-SSC1002	14-SSH1002
3	TAM107	14-SNC1003	14-SNH1003	14-SSC1003	14-SSH1003
4	Jagalene	14-SNC1004	14-SNH1004	14-SSC1004	14-SSH1004
5	KS10HW78-1-1	14-SNC1005	14-SNH1005	14-SSC1005	14-SSH1005
6	KS11HW39-5	14-SNC1006	14-SNH1006	14-SSC1006	14-SSH1006
7	KS11HW39-6	14-SNC1007	14-SNH1007	14-SSC1007	14-SSH1007
8	CO09W040-F1	14-SNC1008	14-SNH1008	14-SSC1008	14-SSH1008
9	CO09W009	14-SNC1009	14-SNH1009	14-SSC1009	14-SSH1009
10	CO11D174	14-SNC1010	14-SNH1010	14-SSC1010	14-SSH1010
11	CO11D346	14-SNC1011	14-SNH1011	14-SSC1011	14-SSH1011
12	CO11D446	14-SNC1012	14-SNH1012	14-SSC1012	14-SSH1012
13	OK09125	14-SNC1013	14-SNH1013	14-SSC1013	14-SSH1013
14	OK1059060	14-SNC1014	14-SNH1014	14-SSC1014	14-SSH1014
15	OK09520	14-SNC1015	14-SNH1015	14-SSC1015	14-SSH1015
16	OK10126	14-SNC1016	14-SNH1016	14-SSC1016	14-SSH1016
17	OK10728W	14-SNC1017	14-SNH1017	14-SSC1017	14-SSH1017
18	OK10805W	14-SNC1018	14-SNH1018	14-SSC1018	14-SSH1018
19	LCH11-1064	14-SNC1019	14-SNH1019	14-SSC1019	14-SSH1019
20	LCH11-1130	14-SNC1020	14-SNH1020	14-SSC1020	14-SSH1020
21	LCH11-109	14-SNC1021	14-SNH1021	14-SSC1021	14-SSH1021
22	LCH10-187	14-SNC1022	14-SNH1022	14-SSC1022	14-SSH1022
23	LCH09-06	14-SNC1023	14-SNH1023	14-SSC1023	14-SSH1023
24	KS030887K-6	14-SNC1024	14-SNH1024	14-SSC1024	14-SSH1024
25	KS050278M-1	14-SNC1025	14-SNH1025	14-SSC1025	14-SSH1025
26	KS061406-LN~37	14-SNC1026	14-SNH1026	14-SSC1026	14-SSH1026
27	KS061406-LN~15	14-SNC1027	14-SNH1027	14-SSC1027	14-SSH1027
28	KS061406-LN~26	14-SNC1028	14-SNH1028	14-SSC1028	14-SSH1028
29	NE10478	14-SNC1029	14-SNH1029	14-SSC1029	14-SSH1029
30	NE10507	14-SNC1030	14-SNH1030	14-SSC1030	14-SSH1030
31	NE10589	14-SNC1031	14-SNH1031	14-SSC1031	14-SSH1031
32	NH11489	14-SNC1032	14-SNH1032	14-SSC1032	14-SSH1032
33	TX08A001249	14-SNC1033	14-SNH1033	14-SSC1033	14-SSH1033
34	TX08V7313	14-SNC1034	14-SNH1034	14-SSC1034	14-SSH1034
35	TX09A001194	14-SNC1035	14-SNH1035	14-SSC1035	14-SSH1035
36	TX09D1172	14-SNC1036	14-SNH1036	14-SSC1036	14-SSH1036
37	HV9W09-0746	14-SNC1037	14-SNH1037	14-SSC1037	14-SSH1037
38	HV9W09-0918	14-SNC1038	14-SNH1038	14-SSC1038	14-SSH1038
39	N11MD2172	14-SNC1039	14-SNH1039	14-SSC1039	14-SSH1039
40	N11MD2157W	14-SNC1040	14-SNH1040	14-SSC1040	14-SSH1040

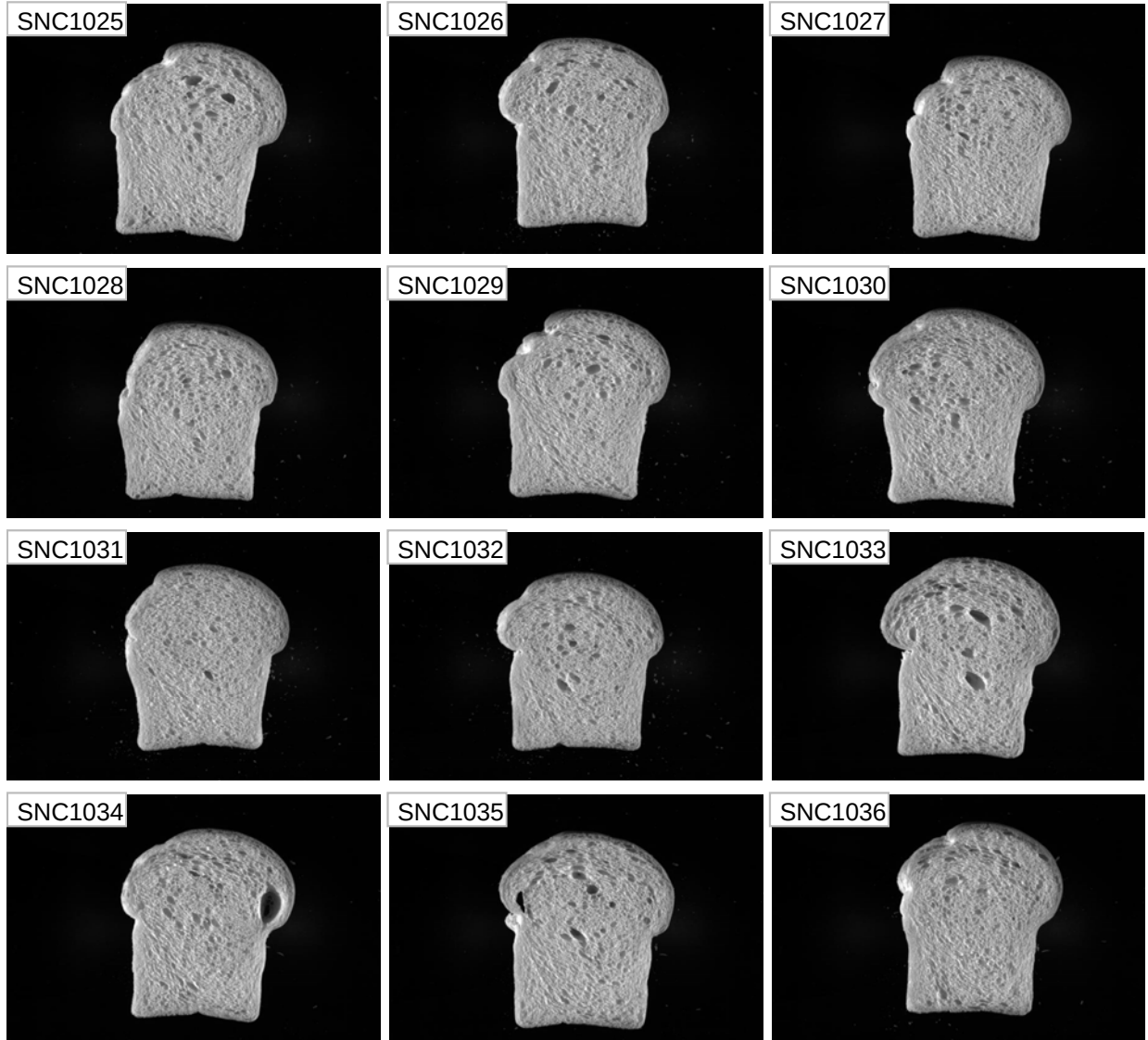
2014 SRPN Intraregional Production Zone North Central Plains



2014 SRPN Intraregional Production Zone North Central Plains



2014 SRPN Intraregional Production Zone North Central Plains

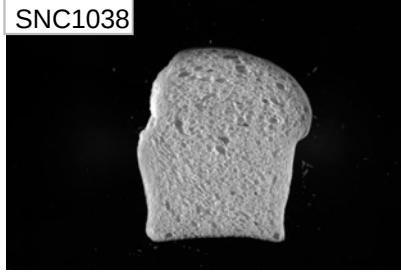


2014 SRPN Intraregional Production Zone North Central Plains

SNC1037



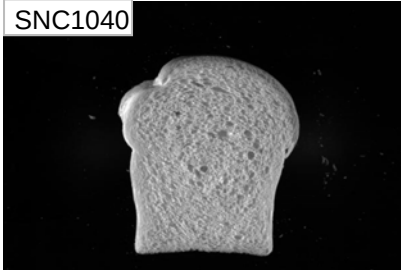
SNC1038



SNC1039



SNC1040





Hard Winter Wheat Quality Report 2014 SRPN-NHP

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

ID	Milling Score	Rating	%	Baking Score	Rating	%	1RS	Trait Deficiencies
Kharkof	40.7	Very Poor	64.6	63.2	Very Good	94.3		2,4,8,10,
Scout 66	61.6	Very Good	97.8	38.0	Poor	56.7		
TAM 107	52.9	Very Poor	83.9	33.6	Poor	50.2	1AL	5,16,
Jagalene	60.9	Very Good	96.6	47.3	Average	70.6		16,
KS10HW78-1-1	60.9	Very Good	96.7	26.5	Very Poor	39.6		5,12,16,
KS11HW39-5	56.1	Poor	89.1	32.7	Very Poor	48.8		12,16,17,
KS11HW39-6	55.1	Poor	87.4	33.4	Very Poor	49.9		16,
CO09W040-F1	59.4	Good	94.4	25.8	Very Poor	38.6		11,12,16,
CO09W009	60.4	Good	95.8	41.0	Average	61.2		3,11,
CO11D174	57.7	Average	91.5	42.0	Average	62.8		
CO11D346	58.4	Good	92.8	48.4	Good	72.2		3,11,13,18,19,
CO11D446	56.2	Average	89.2	45.1	Average	67.3		3,11,13,14,15,
OK09125	58.5	Good	93.0	57.8	Good	86.3		1,5,16,
OK1059060	56.7	Average	90.0	63.8	Very Good	95.2		
OK09520	63.0	Very Good	100.0	35.6	Poor	53.1		14,15,
OK10126	60.5	Very Good	96.1	64.9	Very Good	96.9		
OK10728W	60.4	Very Good	95.8	50.2	Good	74.9		16,
OK10805W	59.6	Good	94.6	56.2	Good	83.9		16,
LCH11-1064	54.1	Poor	85.8	29.9	Very Poor	44.6		13,16,18,21,
LCS Pistol	44.1	Very Poor	70.1	38.8	Average	57.9		16,21,
LCH11-109	56.2	Average	89.3	35.4	Poor	52.9		2,10,16,19,
LCH10-187	52.9	Very Poor	84.0	31.7	Very Poor	47.3		16,
LCH09-06	60.4	Very Good	95.9	34.3	Poor	51.2		1,16,
KanMark	62.3	Very Good	98.9	67.0	Very Good	100.0		
KS050278M-1	52.3	Very Poor	83.1	30.0	Very Poor	44.8		2,14,15,16,20,
HotRod	51.3	Very Poor	81.4	50.2	Good	74.9		8,
KS061406-LN~15	50.1	Very Poor	79.5	53.1	Good	79.3		8,20,
KS061406-LN~26	50.3	Very Poor	79.9	33.9	Poor	50.6		8,16,20,
NE10478	54.0	Poor	85.7	64.1	Very Good	95.7		
NE10507	55.1	Poor	87.5	64.5	Very Good	96.2		

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 2014 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		Baking				Trait	
	Score	Rating	%	Score	Rating	% 1RS	Deficiencies	
NE10589	56.7	Average	90.0	43.8	Average	65.4	16,	
NH11489	60.0	Good	95.3	35.4	Poor	52.9	16,	
TX08A001249	58.0	Average	92.1	66.9	Very Good	99.9 1AL		
TX08V7313	58.6	Good	93.0	45.3	Average	67.6	9,10,	
TX09A001194	58.0	Average	92.1	49.6	Average	74.1	3,	
TX09D1172	59.2	Good	94.0	58.2	Very Good	87.0	16,	
HV9W09-0746	54.6	Poor	86.7	33.7	Poor	50.3	9,13,16,21,	
HV9W09-0918	55.2	Poor	87.7	27.5	Very Poor	41.1	1,13,14,15,16,18,19,21,	
N11MD2172	55.3	Poor	87.8	58.2	Good	86.9		
N11MD2157W	56.6	Average	89.9	55.1	Good	82.2	15,	

2014 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	61.2	10.7	0.6	28.4	7.5	2.51	0.30	44 19	MIXED	30--24--28--18--03	
Scout 66	61.8	10.7	0.6	33.6	7.6	2.72	0.32	58 15	HARD	04--16--33--47--01	
TAM107	61.0	10.3	0.7	34.1	8.9	2.73	0.39	63 15	HARD	04--09--27--60--01	
Jagalene	62.5	10.2	0.6	32.6	8.1	2.76	0.32	69 15	HARD	01--06--16--77--01	
KS10HW78-1-1	62.0	10.6	0.6	33.9	9.1	2.77	0.41	64 15	HARD	03--08--25--64--01	
KS11HW39-5	61.4	10.6	0.6	31.9	8.9	2.63	0.33	60 15	HARD	05--10--33--52--01	
KS11HW39-6	61.2	10.5	0.7	32.6	9.1	2.62	0.35	56 16	HARD	06--20--33--41--02	
CO09W040-F1	62.1	10.7	0.6	34.3	9.2	2.69	0.36	52 15	MIXED	12--22--31--35--03	
CO09W009	63.3	10.9	0.5	36.1	9.6	2.75	0.36	57 14	HARD	05--18--31--46--01	
CO11D174	62.0	11.1	0.5	31.0	9.4	2.63	0.37	63 15	HARD	03--08--26--63--01	
CO11D346	61.3	11.1	0.5	35.5	9.7	2.71	0.38	55 16	HARD	08--17--31--44--02	
CO11D446	61.0	11.2	0.6	31.9	9.7	2.59	0.36	61 17	HARD	06--10--30--54--02	
OK09125	60.1	10.8	0.5	34.0	9.4	2.79	0.39	56 14	HARD	04--20--34--42--01	
OK1059060	61.3	10.9	0.6	33.0	9.1	2.72	0.36	59 15	HARD	04--16--35--45--01	
OK09520	61.7	10.7	0.6	32.6	7.8	2.65	0.35	54 15	HARD	08--19--35--38--02	
OK10126	62.4	10.7	0.5	33.7	8.2	2.80	0.36	71 16	HARD	01--05--15--79--01	
OK10728W	61.8	10.7	0.5	32.8	8.6	2.78	0.37	64 16	HARD	02--11--28--59--01	
OK10805W	62.0	10.9	0.5	33.1	8.2	2.75	0.33	70 15	HARD	01--05--17--77--01	
LCH11-1064	61.4	10.7	0.5	34.4	9.3	2.68	0.35	68 16	HARD	02--05--22--71--01	
LCH11-1130	61.6	10.5	0.6	30.5	8.4	2.62	0.34	49 24	MIXED	25--17--20--38--03	
LCH11-109	61.3	10.6	0.6	29.5	8.1	2.61	0.32	76 16	HARD	00--04--11--85--01	
LCH10-187	61.5	10.7	0.5	32.2	8.6	2.66	0.34	58 15	HARD	05--13--35--47--01	
LCH09-06	60.4	10.5	0.5	32.2	7.2	2.66	0.30	57 14	HARD	05--17--33--45--01	
KS030887K-6	62.7	10.7	0.6	31.6	8.5	2.72	0.35	67 15	HARD	01--07--22--70--01	
KS050278M-1	60.8	10.7	0.5	27.7	7.2	2.59	0.30	69 16	HARD	02--05--16--77--01	
KS061406-LN~37	61.0	11.0	0.5	33.1	8.1	2.71	0.33	78 15	HARD	00--02--09--89--01	
KS061406-LN~15	61.4	11.0	0.6	34.2	8.5	2.78	0.35	78 17	HARD	00--03--11--86--01	
KS061406-LN~26	61.6	10.8	0.5	32.8	8.5	2.70	0.34	77 18	HARD	00--04--12--84--01	
NE10478	61.1	10.7	0.5	33.3	8.4	2.75	0.36	65 15	HARD	02--08--22--68--01	
NE10507	60.6	10.7	0.5	31.5	7.8	2.63	0.34	60 16	HARD	06--11--29--54--02	
NE10589	61.5	10.6	0.6	32.1	8.5	2.75	0.35	62 14	HARD	02--10--31--57--01	
NH11489	62.1	10.9	0.5	30.1	7.9	2.66	0.31	59 16	HARD	06--16--27--51--02	
TX08A001249	62.7	10.9	0.5	31.1	7.8	2.64	0.33	68 15	HARD	02--05--19--74--01	
TX08V7313	62.8	11.3	0.5	32.0	8.1	2.73	0.35	73 15	HARD	00--04--13--83--01	
TX09A001194	62.4	11.2	0.5	35.1	9.7	2.75	0.36	67 15	HARD	01--07--22--70--01	
TX09D1172	62.1	11.0	0.5	32.0	7.9	2.67	0.30	69 15	HARD	01--06--18--75--01	
HV9W09-0746	61.1	11.3	0.5	30.9	8.4	2.64	0.36	67 16	HARD	02--07--20--71--01	
HV9W09-0918	60.4	11.4	0.5	30.6	8.3	2.60	0.35	63 17	HARD	04--08--26--62--01	
N11MD2172	60.8	10.7	0.5	29.6	8.0	2.61	0.33	63 18	HARD	02--17--26--55--01	
N11MD2157W	61.3	11.0	0.5	30.8	7.8	2.64	0.34	69 16	HARD	01--08--16--75--01	

2014 SRPN Intraregional Production Zone

Northern High Plains

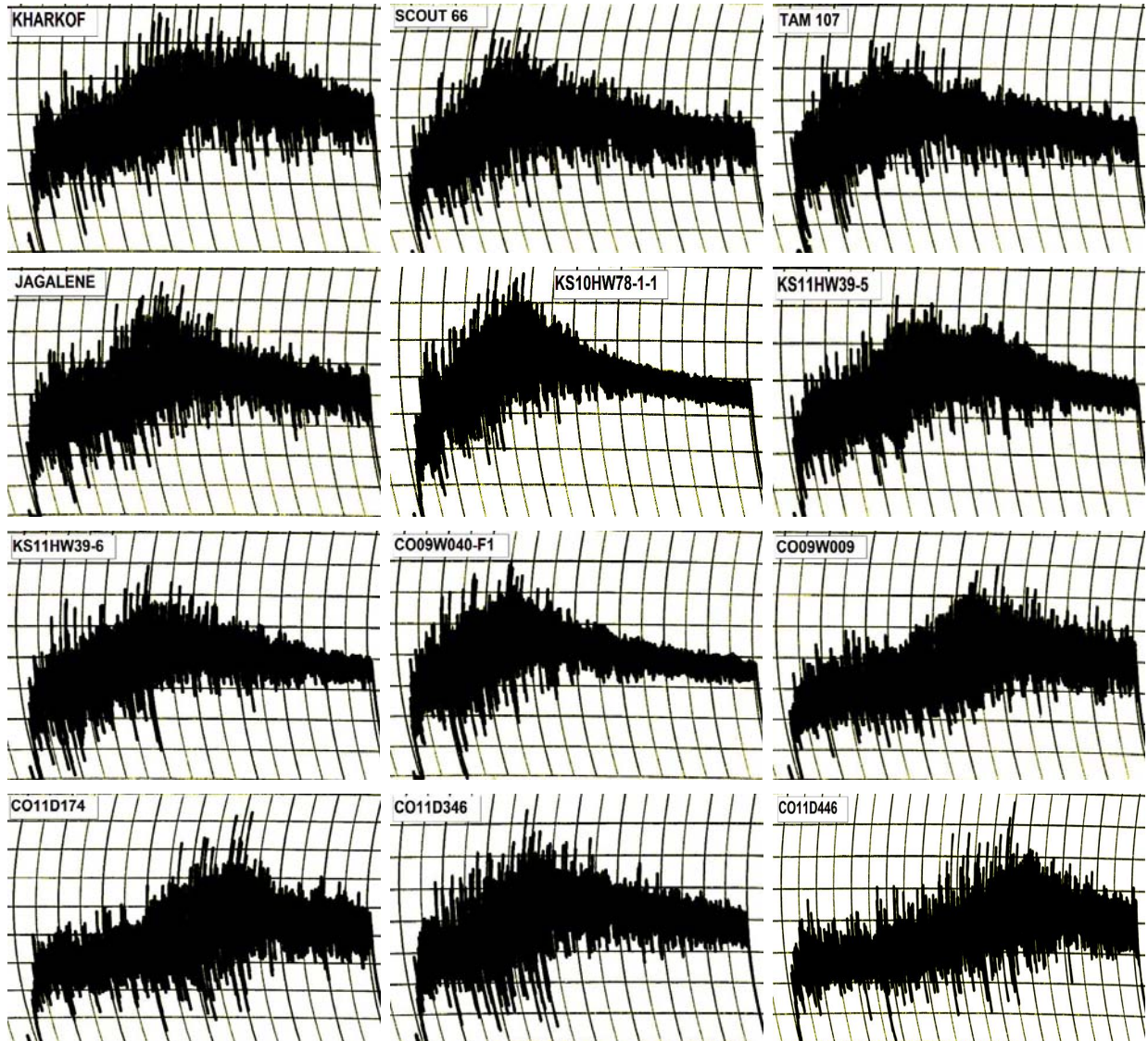
LINE	Wheat		Flour			Noodle Color					
	Protein	Milling Yield	Ash	Protein	PPO	L @ 0	a @ 0	b @ 0	Delta L 24 hrs	Delta a 24 hrs	Delta b 24 hrs
	(%)	(%)	(%)	(%)							
Kharkof	14.9	62.1	0.39	13.4	0.596	80.42	-2.18	22.33	-9.69	0.98	2.02
Scout 66	13.8	69.2	0.37	12.5	0.651	80.37	-2.03	22.39	-10.57	1.16	1.28
TAM107	13.3	65.6	0.38	11.9	0.651	79.61	-2.11	24.68	-10.33	1.39	1.76
Jagalene	13.8	68.9	0.43	12.7	0.560	80.49	-1.97	22.37	-10.55	0.98	2.14
KS10HW78-1-1	12.9	70.5	0.41	11.7	0.581	81.48	-1.97	20.87	-12.33	1.39	2.67
KS11HW39-5	12.7	67.6	0.37	11.4	0.704	82.60	-2.45	21.29	-10.54	1.29	2.95
KS11HW39-6	12.4	67.6	0.34	11.2	0.679	81.77	-2.56	22.91	-8.24	1.04	1.01
CO09W040-F1	12.0	69.7	0.35	10.5	0.678	81.90	-2.35	21.31	-10.45	1.03	3.37
CO09W009	12.4	68.7	0.37	10.9	0.649	82.06	-2.41	22.84	-9.72	1.60	1.38
CO11D174	12.4	69.4	0.40	11.3	0.650	82.68	-2.02	20.09	-11.29	1.01	3.68
CO11D346	11.8	70.4	0.41	10.4	0.580	82.76	-2.14	20.91	-10.11	1.10	3.65
CO11D446	12.2	70.1	0.40	10.6	0.671	81.14	-2.26	23.48	-9.80	1.12	0.82
OK09125	13.0	69.7	0.37	11.8	0.517	81.07	-2.14	23.17	-11.38	1.00	2.94
OK1059060	14.0	69.3	0.43	12.7	0.657	80.14	-2.17	23.92	-11.52	1.17	1.48
OK09520	12.9	71.5	0.38	11.7	0.581	82.03	-2.27	22.30	-9.35	1.19	2.85
OK10126	13.7	68.8	0.43	12.6	0.455	80.09	-1.66	22.02	-13.35	1.90	0.89
OK10728W	14.0	70.2	0.41	12.6	0.482	79.71	-2.03	23.29	-10.65	1.45	1.17
OK10805W	13.6	68.1	0.41	12.2	0.569	81.42	-2.43	22.76	-10.27	1.68	1.09
LCH11-1064	13.3	65.2	0.34	11.3	0.563	81.14	-2.38	22.71	-9.12	1.14	0.21
LCH11-1130	12.9	65.7	0.42	12.1	0.555	79.15	-2.25	25.36	-8.93	1.47	-0.68
LCH11-109	13.2	67.7	0.43	11.5	0.482	79.32	-2.49	26.11	-9.22	1.65	0.33
LCH10-187	13.9	66.0	0.40	12.2	0.592	78.86	-2.08	23.52	-9.93	1.70	2.05
LCH09-06	14.0	69.2	0.37	12.7	0.638	80.01	-1.72	21.65	-12.37	2.35	-0.74
KS030887K-6	13.2	70.7	0.44	12.2	0.625	80.03	-2.40	24.28	-10.37	1.96	-0.07
KS050278M-1	14.0	65.7	0.42	13.1	0.706	79.25	-2.35	24.28	-11.08	1.71	0.11
KS061406-LN~37	13.1	63.2	0.43	12.3	0.500	80.90	-2.29	23.64	-12.23	1.38	3.09
KS061406-LN~15	13.4	63.0	0.44	12.5	0.515	80.53	-1.87	22.35	-12.60	1.45	3.26
KS061406-LN~26	13.5	64.0	0.44	12.6	0.602	80.07	-2.14	23.97	-11.59	1.52	2.34
NE10478	13.9	65.9	0.41	12.6	0.636	80.63	-1.56	20.83	-9.36	0.99	0.43
NE10507	13.3	67.6	0.40	11.9	0.637	80.70	-2.37	23.57	-11.09	1.42	0.88
NE10589	13.4	68.0	0.43	12.2	0.601	80.59	-2.01	22.04	-10.00	1.14	1.10
NH11489	13.4	70.1	0.39	12.1	0.623	81.94	-2.57	22.54	-10.26	1.52	2.29
TX08A001249	13.2	67.3	0.40	12.1	0.571	79.94	-1.80	22.83	-10.54	1.36	1.76
TX08V7313	13.4	67.9	0.48	11.8	0.676	80.82	-2.26	24.59	-11.62	1.42	1.80
TX09A001194	13.4	68.1	0.43	12.2	0.617	79.73	-1.85	24.04	-11.34	1.59	1.93
TX09D1172	14.6	67.6	0.40	13.4	0.562	79.05	-2.13	26.31	-9.08	1.21	0.48
HV9W09-0746	13.5	68.3	0.45	12.5	0.765	78.73	-2.39	26.85	-10.29	1.71	-0.17
HV9W09-0918	12.7	68.9	0.41	11.3	0.494	79.62	-2.04	24.31	-9.92	1.39	1.25
N11MD2172	13.3	68.9	0.41	12.0	0.570	81.11	-2.10	23.06	-9.98	1.34	1.47
N11MD2157W	13.3	68.1	0.42	11.7	0.530	80.42	-2.18	24.59	-8.19	1.18	0.74

2014 SRPN Intraregional Production Zone

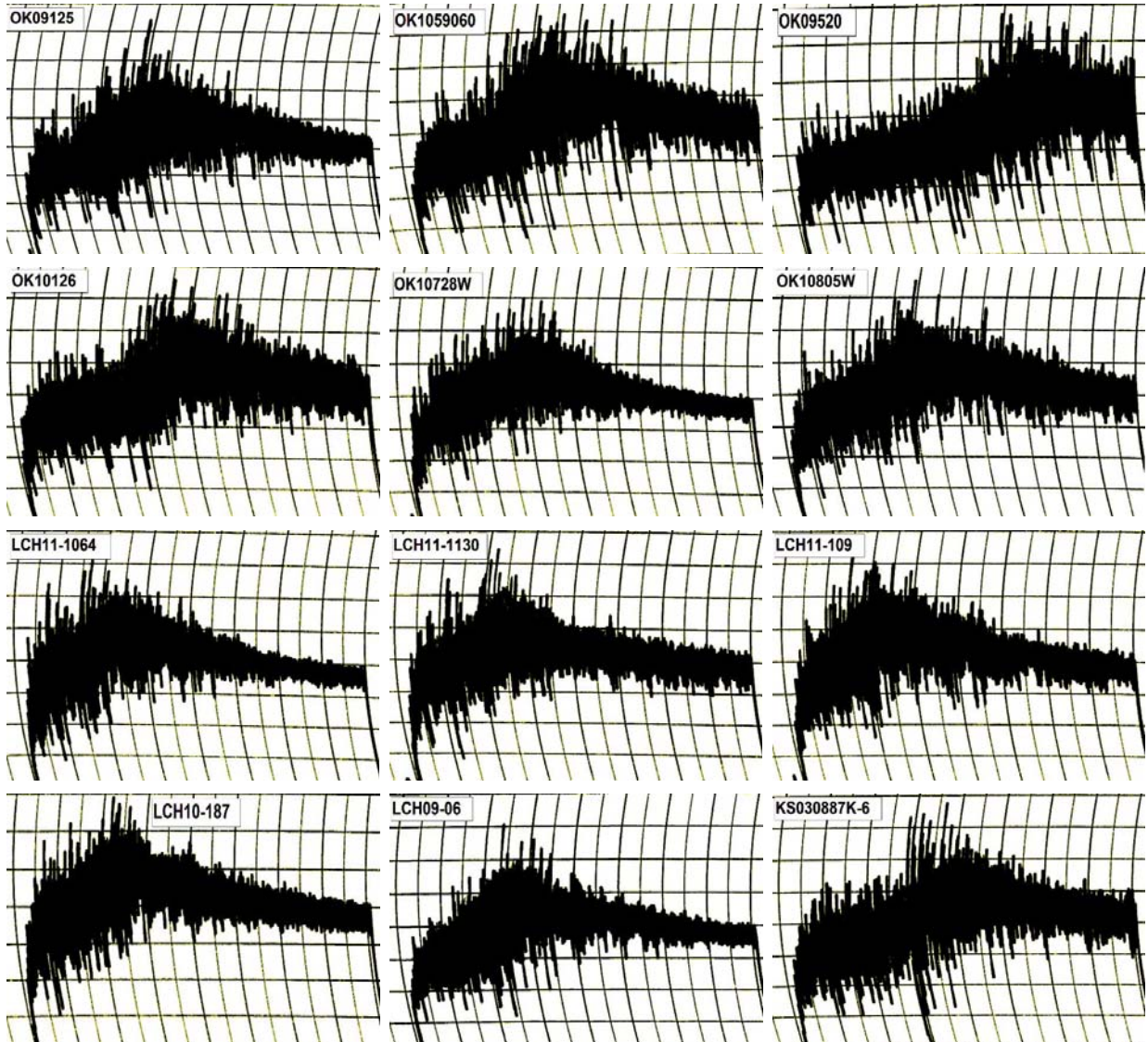
Northern High Plains

	Flour Protein	Mixograph			
		Absorption	As-Is	Corrected	Tolerance
Line	(%)	(%)	(min)	(min)	
Kharkof	13.4	64.3	4.00	4.00	3
Scout 66	12.5	63.9	2.63	2.63	3
TAM107	11.9	61.7	2.50	2.47	2
Jagalene	12.7	63.1	3.38	3.38	2
KS10HW78-1-1	11.7	61.5	2.63	2.55	0
KS11HW39-5	11.4	60.9	3.13	2.90	0
KS11HW39-6	11.2	61.7	3.25	2.95	0
CO09W040-F1	10.5	60.5	2.50	2.06	0
CO09W009	10.9	61.0	4.50	3.88	4
CO11D174	11.3	61.8	5.00	4.58	5
CO11D346	10.4	60.3	3.13	2.55	3
CO11D446	10.6	59.6	7.00	5.86	4
OK09125	11.8	62.7	3.50	3.42	1
OK1059060	12.7	64.1	3.50	3.50	4
OK09520	11.7	61.5	5.75	5.55	5
OK10126	12.6	64.0	3.88	3.88	4
OK10728W	12.6	64.0	3.00	3.00	0
OK10805W	12.2	63.3	3.13	3.13	2
LCH11-1064	11.3	60.4	2.38	2.19	0
LCH11-1130	12.1	63.0	2.50	2.50	2
LCH11-109	11.5	62.1	2.25	2.12	1
LCH10-187	12.2	63.3	2.50	2.50	0
LCH09-06	12.7	63.1	2.88	2.88	0
KS030887K-6	12.2	62.2	4.25	4.25	4
KS050278M-1	13.1	63.8	2.13	2.13	0
KS061406-LN~37	12.3	63.4	3.25	3.25	3
KS061406-LN~15	12.5	63.7	3.00	3.00	3
KS061406-LN~26	12.6	64.0	2.50	2.50	2
NE10478	12.6	63.9	3.13	3.13	3
NE10507	11.9	62.7	3.25	3.21	3
NE10589	12.2	63.3	3.50	3.50	2
NH11489	12.1	63.1	2.88	2.88	1
TX08A001249	12.1	64.1	4.25	4.25	3
TX08V7313	11.8	62.6	3.38	3.30	3
TX09A001194	12.2	63.3	4.00	4.00	4
TX09D1172	13.4	65.3	3.00	3.00	2
HV9W09-0746	12.5	60.2	3.00	3.00	0
HV9W09-0918	11.3	60.2	2.00	1.82	0
N11MD2172	12.0	62.0	5.00	5.00	4
N11MD2157W	11.7	62.4	5.50	5.29	5

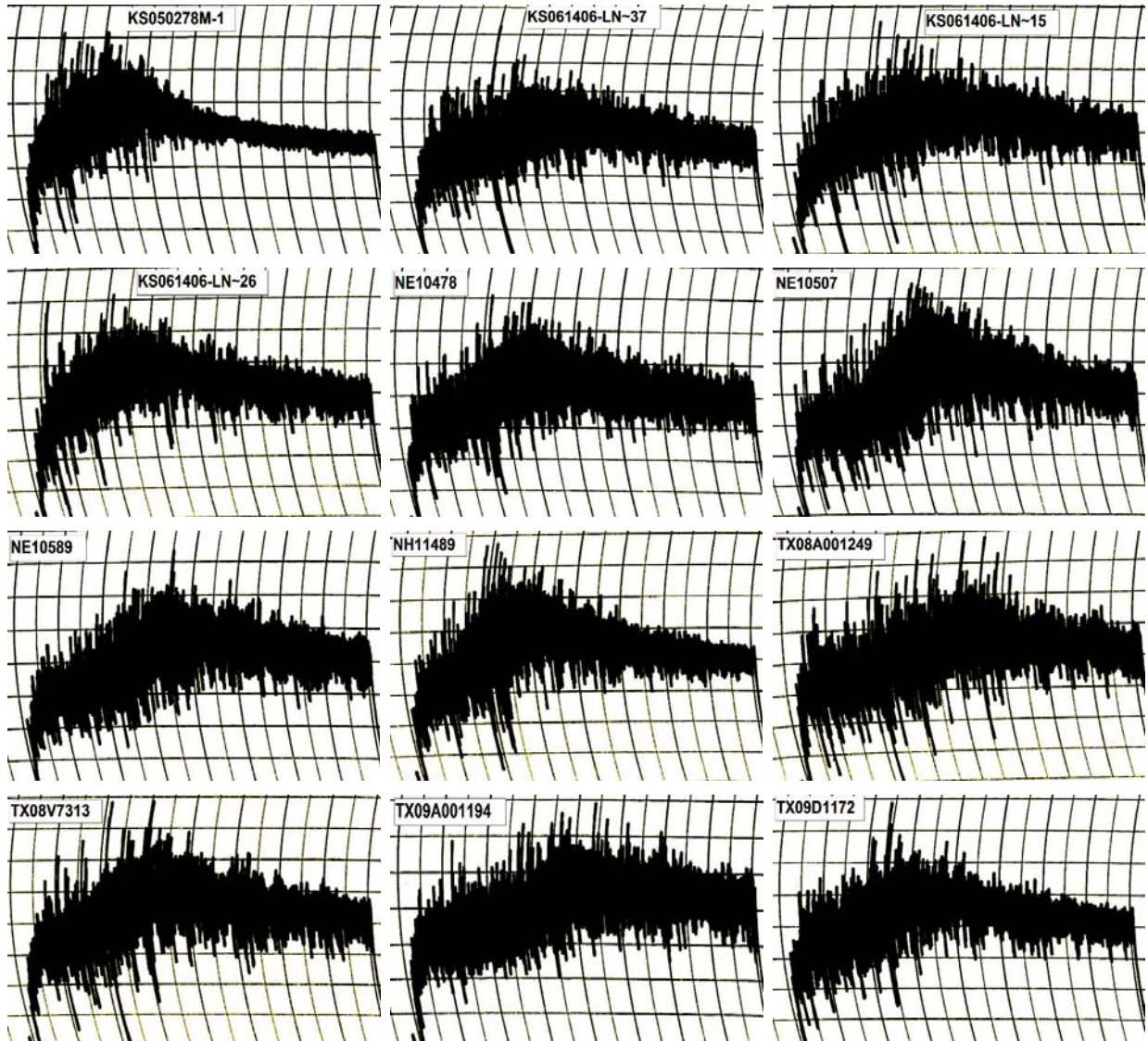
2014 SRPN Intraregional Production Zone Northern High Plains



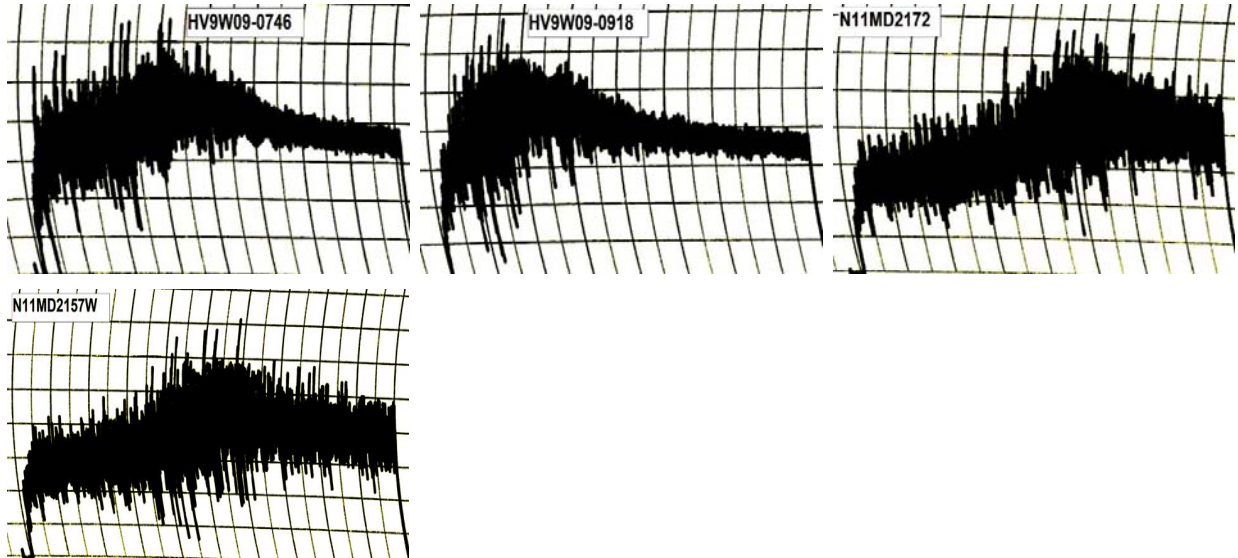
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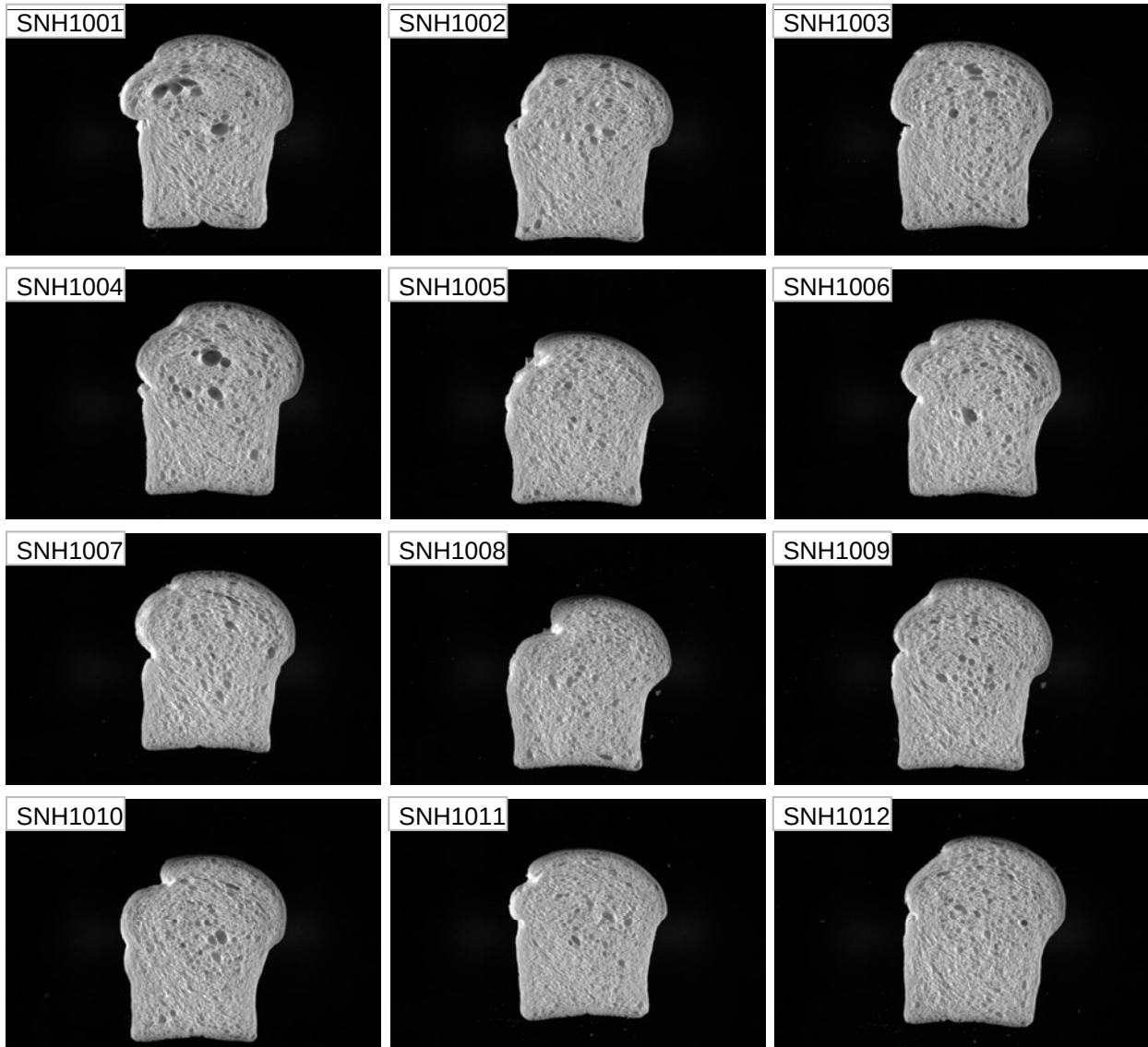
Line	RVA						
	Stirring Number	Peak Viscosity	Trough Viscosity	Breakdown	Final Viscosity	Set back	Peak Time
	(RVU)	(RVU)	(RVU)	(RVU)	(RVU)	(RVU)	(min)
Kharkof	146.50	243.33	172.33	71.00	298.50	126.17	6.40
Scout 66	122.17	214.33	138.83	75.50	260.50	121.67	6.13
TAM107	120.08	269.67	175.00	94.67	306.92	131.92	6.33
Jagalene	128.25	218.42	146.58	71.83	273.67	127.08	6.20
KS10HW78-1-1	126.17	290.17	177.17	113.00	293.33	116.17	6.33
KS11HW39-5	107.08	259.00	163.67	95.33	287.83	124.17	6.27
KS11HW39-6	107.17	256.83	161.33	95.50	288.17	126.83	6.27
CO09W040-F1	112.33	301.00	172.25	128.75	289.50	117.25	6.27
CO09W009	126.58	242.42	161.25	81.17	288.58	127.33	6.27
CO11D174	97.33	274.92	167.92	107.00	301.58	133.67	6.20
CO11D346	112.17	225.67	144.83	80.83	282.67	137.83	6.07
CO11D446	120.08	251.17	158.92	92.25	298.58	139.67	6.07
OK09125	127.67	250.08	168.92	81.17	303.25	134.33	6.27
OK1059060	121.50	231.42	155.75	75.67	283.00	127.25	6.27
OK09520	101.67	238.83	153.75	85.08	285.75	132.00	6.13
OK10126	114.08	262.33	146.75	115.58	253.75	107.00	6.20
OK10728W	126.58	245.75	163.50	82.25	295.92	132.42	6.27
OK10805W	138.17	206.25	131.25	75.00	241.25	110.00	6.20
LCH11-1064	119.58	255.50	161.25	94.25	286.17	124.92	6.27
LCH11-1130	116.08	242.75	158.42	84.33	282.00	123.58	6.33
LCH11-109	125.33	236.75	153.58	83.17	281.00	127.42	6.20
LCH10-187	120.17	227.75	146.33	81.42	263.25	116.92	6.27
LCH09-06	127.83	237.58	153.25	84.33	280.92	127.67	6.20
KS030887K-6	114.75	216.00	141.17	74.83	259.42	118.25	6.20
KS050278M-1	142.08	242.83	169.92	72.92	293.92	124.00	6.47
KS061406-LN~37	144.58	242.75	163.42	79.33	285.42	122.00	6.33
KS061406-LN~15	143.83	236.83	156.42	80.42	281.50	125.08	6.27
KS061406-LN~26	147.92	244.33	166.42	77.92	285.17	118.75	6.40
NE10478	128.00	195.75	139.17	56.58	259.83	120.67	6.20
NE10507	128.75	285.00	168.25	116.75	267.00	98.75	6.33
NE10589	133.75	221.08	157.00	64.08	283.25	126.25	6.33
NH11489	132.42	232.17	164.58	67.58	299.92	135.33	6.20
TX08A001249	130.17	277.25	180.58	96.67	304.42	123.83	6.40
TX08V7313	117.42	237.25	160.50	76.75	283.25	122.75	6.33
TX09A001194	94.00	242.33	155.08	87.25	281.83	126.75	6.20
TX09D1172	111.25	227.50	145.83	81.67	267.75	121.92	6.20
HV9W09-0746	118.75	229.00	146.67	82.33	262.58	115.92	6.27
HV9W09-0918	118.17	235.33	150.42	84.92	276.42	126.00	6.20
N11MD2172	101.58	229.83	147.33	82.50	276.42	129.08	6.20
N11MD2157W	107.17	249.67	156.08	93.58	286.00	129.92	6.13

2014 SRPN Intraregional Production Zone

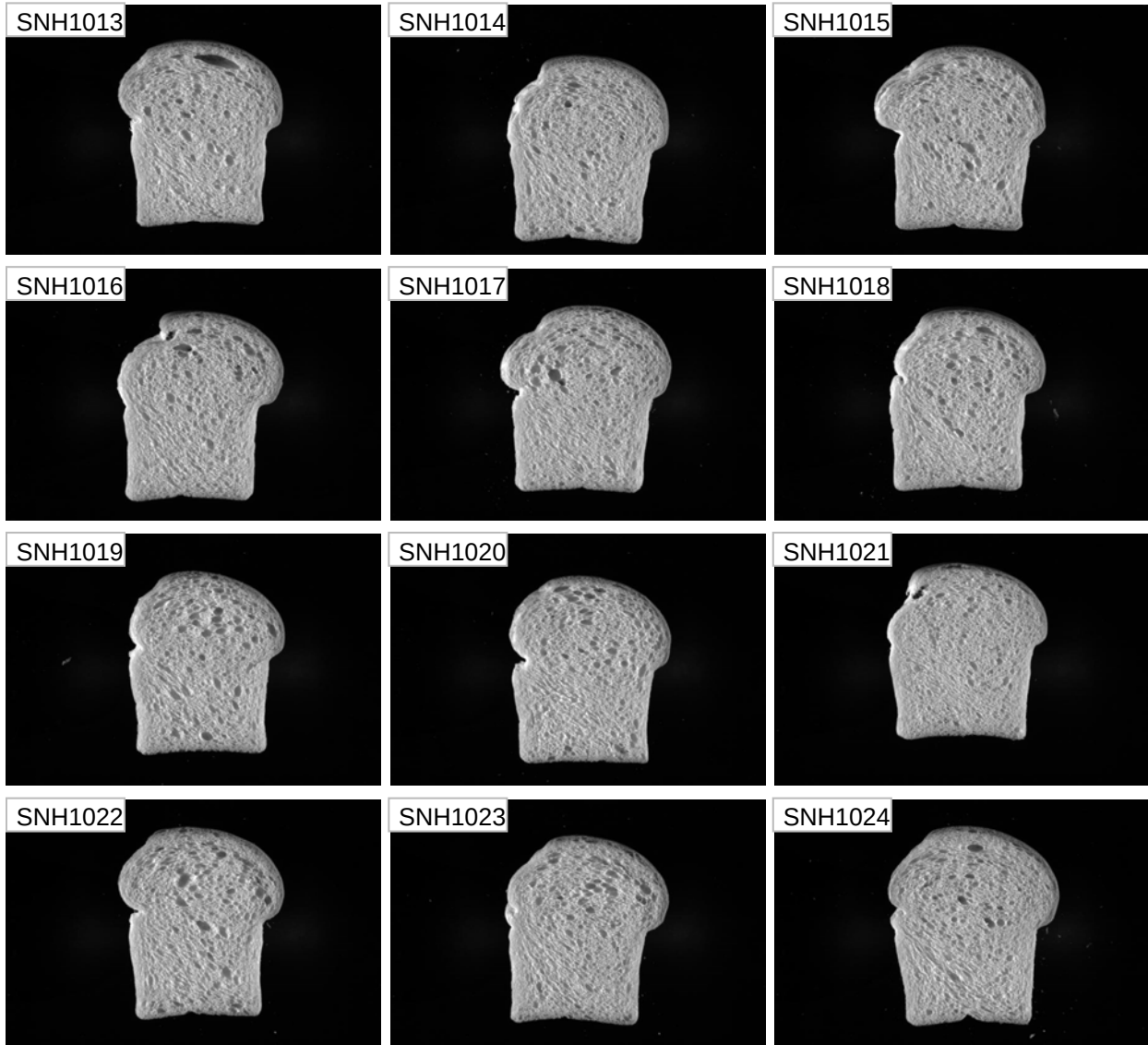
Northern High Plains

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	13.4	63.1	4.88	4.88	172.4	8.1	4.0	970	6.4	64
Scout 66	12.5	63.2	3.13	3.13	173.4	7.9	3.5	935	6.2	67
TAM107	11.9	61.3	3.25	3.21	170.9	7.8	3.5	925	6.3	70
Jagalene	12.7	64.1	4.50	4.50	174.1	7.9	3.5	1000	6.7	72
KS10HW78-1-1	11.7	60.2	2.88	2.79	170.3	7.5	3.5	855	5.8	63
KS11HW39-5	11.4	60.3	3.88	3.60	170.0	7.6	4.5	890	6.2	70
KS11HW39-6	11.2	61.8	3.75	3.41	170.5	7.4	4.5	880	6.0	70
CO09W040-F1	10.5	60.2	2.75	2.26	170.3	7.5	2.5	865	5.9	74
CO09W009	10.9	61.0	5.75	4.96	170.5	7.6	5.5	960	6.5	83
CO11D174	11.3	63.0	6.00	5.50	172.4	7.8	5.5	955	6.5	79
CO11D346	10.4	62.1	4.25	3.46	171.9	7.3	4.0	825	5.5	70
CO11D446	10.6	61.4	8.50	7.11	170.6	7.8	4.0	950	6.5	84
OK09125	11.8	63.4	3.88	3.79	173.1	8.0	4.0	970	6.5	76
OK1059060	12.7	64.8	4.75	4.75	175.0	8.0	4.0	945	6.3	66
OK09520	11.7	62.3	7.50	7.24	171.6	7.7	4.5	975	6.6	77
OK10126	12.6	64.1	5.00	5.00	173.6	7.8	4.0	975	6.5	70
OK10728W	12.6	62.3	3.00	3.00	172.3	7.8	4.0	930	6.2	66
OK10805W	12.2	63.3	4.00	4.00	173.4	8.0	4.0	945	6.2	70
LCH11-1064	11.3	63.1	3.00	2.76	173.3	7.3	1.5	880	5.8	69
LCH11-1130	12.1	63.2	2.75	2.75	173.0	7.4	2.0	920	6.1	68
LCH11-109	11.5	61.2	2.75	2.59	170.8	7.5	3.0	830	5.5	62
LCH10-187	12.2	61.1	2.75	2.75	170.9	7.5	2.5	930	6.2	68
LCH09-06	12.7	61.3	3.00	3.00	170.9	7.6	3.5	945	6.4	66
KS030887K-6	12.2	63.1	5.50	5.50	172.4	7.9	5.0	995	6.7	76
KS050278M-1	13.1	62.3	2.50	2.50	172.1	7.5	2.5	905	6.1	60
KS061406-LN~37	12.3	63.6	4.25	4.25	173.5	7.9	3.0	880	5.9	63
KS061406-LN~15	12.5	64.1	3.88	3.88	173.5	7.8	4.0	865	5.8	60
KS061406-LN~26	12.6	65.2	2.88	2.88	174.8	7.8	2.5	865	5.7	59
NE10478	12.6	65.3	4.13	4.13	175.7	7.8	5.0	935	6.2	66
NE10507	11.9	65.3	5.25	5.18	175.0	7.9	4.0	1010	6.7	80
NE10589	12.2	63.2	4.50	4.50	173.2	7.8	4.5	950	6.3	71
NH11489	12.1	63.1	3.75	3.75	173.1	7.4	4.5	885	5.9	64
TX08A001249	12.1	64.1	4.63	4.63	174.2	7.9	5.0	965	6.5	73
TX08V7313	11.8	63.8	4.50	4.39	174.2	8.0	3.5	950	6.4	74
TX09A001194	12.2	63.1	4.50	4.50	173.5	8.2	3.5	1010	6.8	77
TX09D1172	13.4	64.4	3.50	3.50	174.2	7.7	4.0	985	6.6	66
HV9W09-0746	12.5	61.1	3.50	3.50	171.2	7.6	1.5	920	6.2	66
HV9W09-0918	11.3	61.1	2.38	2.17	171.3	7.3	2.0	835	5.5	64
N11MD2172	12.0	62.5	6.13	6.13	172.5	7.5	5.0	930	6.2	70
N11MD2157W	11.7	62.4	6.75	6.49	171.9	7.5	5.0	910	6.1	70

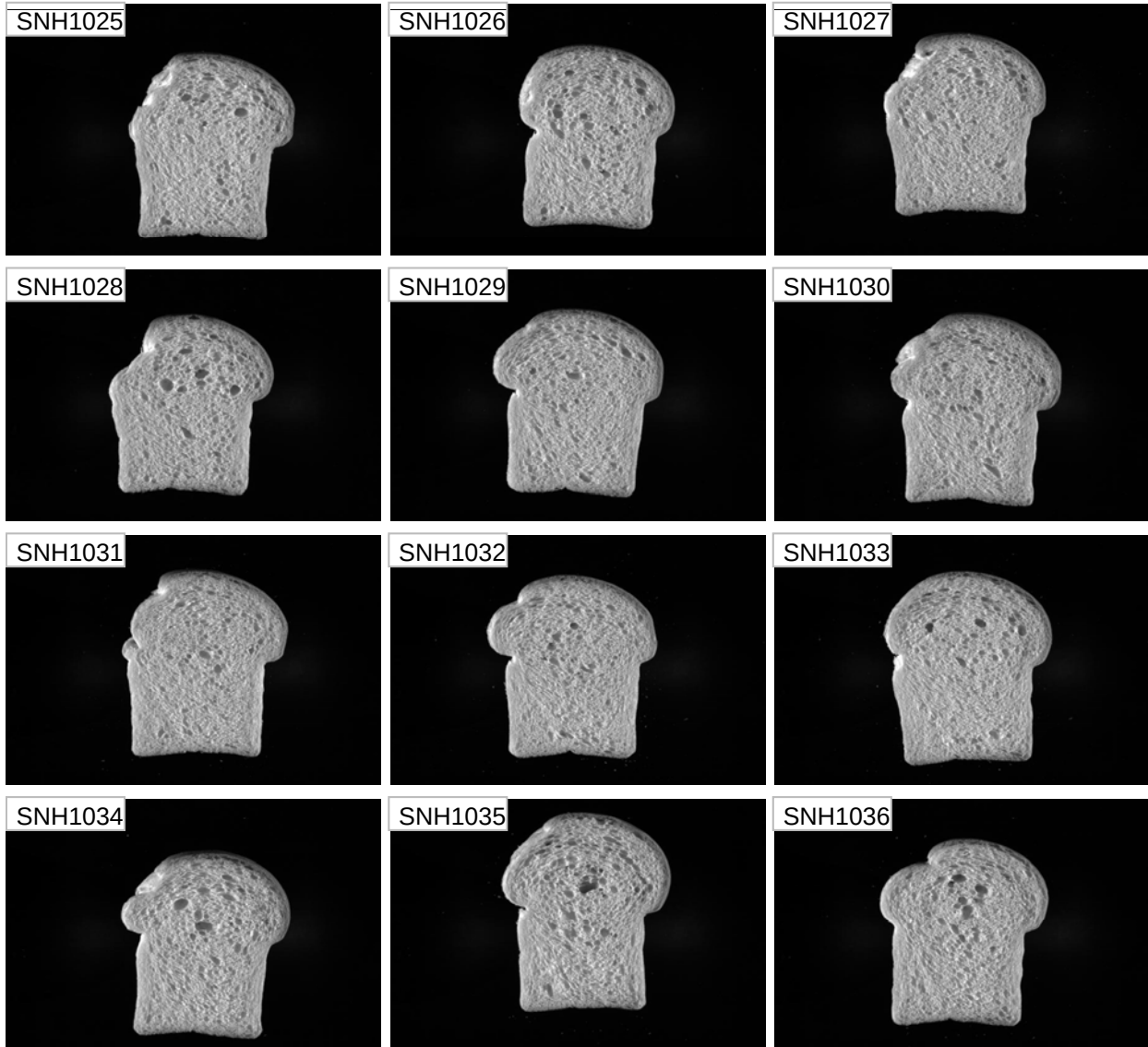
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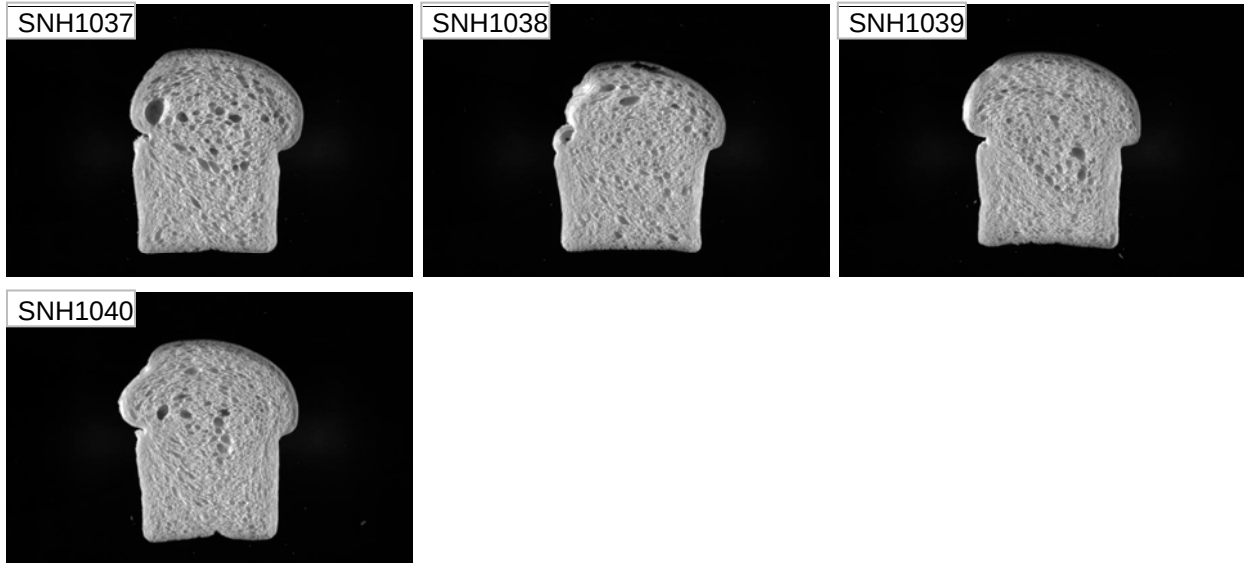
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Hard Winter Wheat Quality Report 2014 SRPN-SCP

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

ID	Milling Score	Rating	%	Baking Score	Rating	%	1RS	Trait Deficiencies
Kharkof	33.2	Very Poor	56.3	47.1	Average	70.6		4,8,10,
Scout 66	52.6	Good	89.1	50.1	Good	75.0		16,
TAM 107	47.9	Poor	81.2	54.7	Good	82.0	1AL	
Jagalene	55.7	Very Good	94.5	45.5	Average	68.2		5,
KS10HW78-1-1	59.0	Very Good	100.0	29.3	Very Poor	43.9		16,17,19,
KS11HW39-5	52.1	Good	88.3	46.0	Average	69.0		12,16,17,
KS11HW39-6	51.0	Average	86.4	43.8	Poor	65.6		16,21,
CO09W040-F1	54.8	Very Good	92.9	42.9	Poor	64.3		11,16,
CO09W009	50.2	Average	85.2	47.5	Good	71.2		11,15,
CO11D174	48.5	Poor	82.2	34.1	Very Poor	51.1		14,15,
CO11D346	53.0	Good	89.9	35.7	Very Poor	53.4		11,16,19,
CO11D446	50.6	Average	85.7	54.8	Good	82.1		3,14,15,
OK09125	53.1	Good	90.1	46.5	Average	69.7		3,5,16,
OK1059060	51.4	Average	87.1	62.1	Very Good	92.9		
OK09520	54.6	Very Good	92.5	50.9	Good	76.2		14,15,
OK10126	50.7	Average	85.9	57.1	Very Good	85.6		15,
OK10728W	55.4	Very Good	93.9	43.5	Poor	65.2		
OK10805W	52.9	Good	89.6	57.3	Very Good	85.8		
LCH11-1064	46.5	Poor	78.9	34.3	Very Poor	51.3		16,18,21,
LCS Pistol	35.0	Very Poor	59.3	38.9	Poor	58.2		2,4,8,16,18,21,
LCH11-109	51.3	Good	87.0	33.7	Very Poor	50.4		16,
LCH10-187	44.2	Very Poor	74.9	44.2	Average	66.2		
LCH09-06	49.0	Average	83.1	46.1	Average	69.1		1,16,
KanMark	55.3	Very Good	93.8	32.9	Very Poor	49.3		14,15,
KS050278M-1	46.1	Poor	78.1	42.3	Poor	63.4		2,16,
HotRod	43.3	Very Poor	73.4	46.6	Average	69.8		8,
KS061406-LN~15	43.6	Very Poor	74.0	42.6	Poor	63.8		5,8,
KS061406-LN~26	47.2	Poor	80.0	37.2	Poor	55.7		16,
NE10478	51.5	Good	87.3	51.9	Good	77.7		
NE10507	45.2	Very Poor	76.7	48.8	Good	73.1		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 2014 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
NE10589	45.2	Very Poor	76.6	61.4	Very Good	91.9		9,10,
NH11489	53.5	Very Good	90.6	61.9	Very Good	92.7		2,16,
TX08A001249	51.4	Good	87.2	46.9	Average	70.2	1AL	15,
TX08V7313	48.5	Poor	82.3	64.9	Very Good	97.2		9,10,
TX09A001194	48.8	Average	82.8	66.8	Very Good	100.0		10,
TX09D1172	55.5	Very Good	94.1	59.6	Very Good	89.3		
HV9W09-0746	48.0	Poor	81.5	40.4	Poor	60.5		13,16,21,
HV9W09-0918	48.7	Average	82.5	17.4	Very Poor	26.1		11,12,13,14,16,17,18,19,20,21,
N11MD2172	48.1	Poor	81.6	30.4	Very Poor	45.5		2,4,14,15,
N11MD2157W	44.5	Very Poor	75.5	55.2	Good	82.7		3,5,14,15,

2014 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	59.7	12.8	0.4	27.5	8.0	2.43	0.29	42 21	MIXED	36--23--20--21--03	
Scout 66	59.3	13.1	0.4	30.0	9.0	2.58	0.33	58 17	HARD	06--15--30--49--02	
TAM107	58.2	12.7	0.4	30.4	9.3	2.58	0.35	57 16	HARD	07--18--31--44--02	
Jagalene	60.3	12.3	0.4	30.1	8.7	2.68	0.36	65 17	HARD	03--09--26--62--01	
KS10HW78-1-1	59.6	12.4	0.5	31.6	8.5	2.67	0.33	60 16	HARD	05--10--33--52--01	
KS11HW39-5	58.8	12.4	0.5	30.2	8.2	2.56	0.32	50 17	MIXED	14--28--31--27--03	
KS11HW39-6	59.0	12.5	0.4	30.3	8.4	2.58	0.31	51 17	MIXED	16--23--28--33--03	
CO09W040-F1	59.1	12.7	0.4	30.7	8.5	2.58	0.32	44 16	MIXED	28--26--25--21--03	
CO09W009	60.4	12.7	0.5	31.0	9.0	2.55	0.34	50 17	MIXED	14--24--32--30--03	
CO11D174	59.2	12.7	0.5	27.4	8.6	2.51	0.33	57 17	HARD	07--22--28--43--02	
CO11D346	59.5	12.5	0.5	30.0	8.8	2.55	0.33	51 19	MIXED	14--25--29--32--03	
CO11D446	58.7	12.8	0.5	28.6	9.6	2.48	0.34	57 16	HARD	07--19--30--44--02	
OK09125	58.2	12.6	0.4	32.1	9.6	2.70	0.37	55 16	HARD	07--20--33--40--02	
OK1059060	59.4	12.9	0.4	29.5	8.8	2.57	0.33	59 17	HARD	05--13--31--51--01	
OK09520	58.8	12.8	0.4	30.0	7.9	2.57	0.35	46 16	MIXED	21--30--29--20--03	
OK10126	59.6	12.6	0.4	30.7	9.4	2.66	0.35	70 16	HARD	02--05--20--73--01	
OK10728W	59.4	12.4	0.4	29.1	8.4	2.59	0.36	62 14	HARD	02--12--28--58--01	
OK10805W	59.4	12.7	0.4	29.3	7.5	2.59	0.30	69 15	HARD	01--06--17--76--01	
LCH11-1064	59.1	12.5	0.5	29.0	8.7	2.53	0.33	70 17	HARD	02--05--16--77--01	
LCH11-1130	58.9	12.6	0.4	25.8	7.9	2.45	0.32	49 25	MIXED	28--12--21--39--03	
LCH11-109	58.8	13.0	0.4	26.4	8.0	2.51	0.32	78 17	HARD	02--02--07--89--01	
LCH10-187	59.1	13.3	0.4	30.5	9.2	2.58	0.30	60 18	HARD	07--12--29--52--02	
LCH09-06	57.7	13.0	0.4	28.9	8.4	2.52	0.33	54 17	MIXED	11--22--28--39--03	
KS030887K-6	60.1	13.3	0.4	28.3	7.5	2.59	0.33	65 15	HARD	02--08--24--66--01	
KS050278M-1	58.4	12.8	0.5	25.9	7.8	2.55	0.31	71 16	HARD	02--04--13--81--01	
KS061406-LN~37	58.0	13.2	0.4	30.9	8.3	2.67	0.34	74 18	HARD	01--03--18--78--01	
KS061406-LN~15	58.7	13.5	0.4	32.1	8.8	2.71	0.36	71 19	HARD	01--07--19--73--01	
KS061406-LN~26	58.9	13.6	0.4	33.1	8.8	2.70	0.35	69 19	HARD	00--11--22--67--01	
NE10478	58.8	13.2	0.4	28.0	7.7	2.55	0.31	67 15	HARD	02--07--17--74--01	
NE10507	56.8	13.2	0.4	28.8	8.6	2.52	0.32	54 16	HARD	08--26--31--35--02	
NE10589	59.2	12.2	0.5	27.8	8.6	2.55	0.31	62 17	HARD	04--15--27--54--01	
NH11489	59.9	12.4	0.4	25.4	7.4	2.49	0.30	58 16	HARD	05--17--33--45--01	
TX08A001249	60.4	12.7	0.4	27.5	7.8	2.49	0.31	61 16	HARD	04--15--29--52--01	
TX08V7313	60.6	13.1	0.4	26.7	7.5	2.53	0.31	69 17	HARD	01--06--21--72--01	
TX09A001194	60.0	12.8	0.5	31.7	8.6	2.61	0.31	58 16	HARD	05--19--30--46--01	
TX09D1172	60.5	12.7	0.4	29.8	7.3	2.62	0.32	67 15	HARD	00--08--22--70--01	
HV9W09-0746	59.4	12.5	0.4	29.0	8.3	2.60	0.31	64 17	HARD	04--09--25--62--01	
HV9W09-0918	59.0	12.9	0.6	27.9	8.1	2.51	0.33	58 17	HARD	08--16--27--49--02	
N11MD2172	58.8	12.8	0.5	25.1	6.9	2.43	0.28	60 17	HARD	05--15--28--52--01	
N11MD2157W	58.6	12.8	0.4	28.4	10.1	2.53	0.36	65 19	HARD	07--10--18--65--02	

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South Central Plains

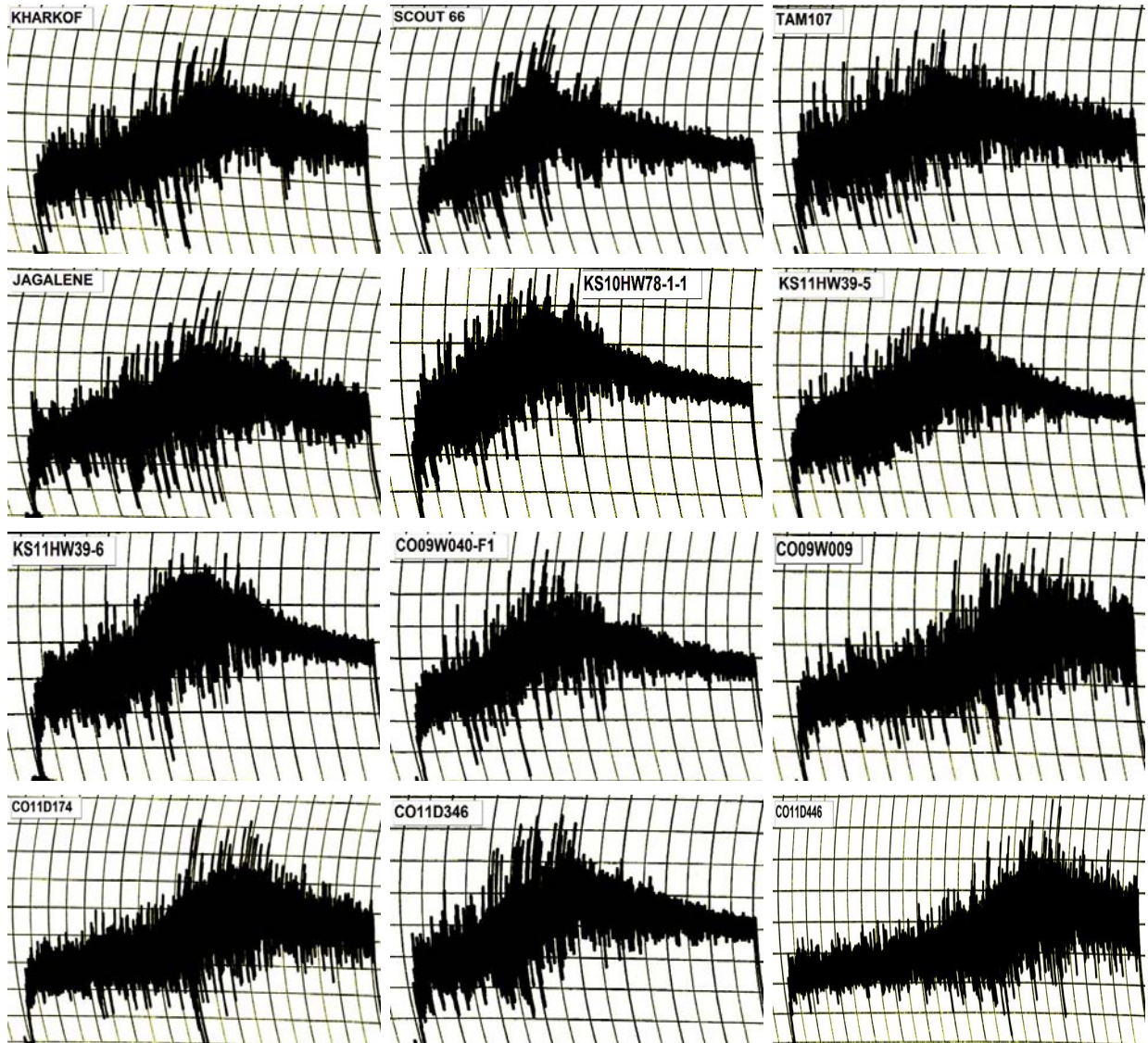
LINE	Wheat		Flour			Noodle Color					
	Protein	Milling Yield	Ash	Protein	PPO	L @ 0	a @ 0	b @ 0	Delta L 24 hrs	Delta a 24 hrs	Delta b 24 hrs
	(%)	(%)	(%)	(%)							
Kharkof	15.9	60.6	0.42	14.6	0.737	80.60	-1.67	21.23	-9.56	1.00	0.35
Scout 66	14.6	68.8	0.40	13.3	0.751	80.92	-1.22	19.44	-12.54	0.50	3.65
TAM107	13.7	66.4	0.39	12.5	0.778	79.82	-1.88	23.30	-8.64	0.64	2.04
Jagalene	14.3	69.5	0.43	13.2	0.643	80.11	-1.63	21.85	-9.57	0.84	2.66
KS10HW78-1-1	13.8	70.6	0.39	12.4	0.706	78.28	-1.44	21.33	-9.80	1.21	1.21
KS11HW39-5	13.7	68.1	0.35	12.4	0.828	81.72	-1.90	20.19	-9.30	0.91	1.67
KS11HW39-6	13.7	67.3	0.35	12.3	0.774	80.81	-1.94	21.65	-9.89	1.11	0.87
CO09W040-F1	12.9	70.1	0.35	11.7	0.833	81.25	-2.19	22.47	-9.17	2.71	-0.93
CO09W009	13.4	66.9	0.37	11.8	0.810	81.03	-2.16	22.71	-8.61	2.48	-1.10
CO11D174	13.9	67.2	0.40	12.8	0.837	81.01	-1.68	20.99	-9.95	0.58	1.47
CO11D346	13.1	70.5	0.41	11.8	0.776	81.82	-1.96	21.54	-10.62	0.87	1.90
CO11D446	13.6	68.6	0.39	12.3	0.881	80.15	-1.48	21.64	-9.23	0.38	2.02
OK09125	13.8	69.2	0.38	13.0	0.784	80.92	-2.21	23.30	-9.52	0.74	0.92
OK1059060	14.6	68.1	0.42	13.4	0.860	80.13	-1.86	22.77	-8.85	0.53	0.49
OK09520	13.7	69.7	0.34	12.5	0.806	81.04	-2.15	22.26	-7.86	0.73	0.00
OK10126	14.7	66.2	0.41	13.5	0.669	80.36	-1.37	20.63	-12.69	1.17	1.05
OK10728W	14.3	68.9	0.40	13.1	0.668	80.03	-1.85	21.01	-11.77	1.83	2.75
OK10805W	14.1	66.3	0.43	12.6	0.730	80.02	-1.92	21.76	-10.25	1.42	1.57
LCH11-1064	13.9	64.0	0.38	12.5	0.859	78.96	-2.02	24.09	-9.03	1.53	0.07
LCH11-1130	13.6	61.7	0.35	12.3	0.788	81.16	-2.26	22.79	-9.06	0.76	0.27
LCH11-109	14.0	66.9	0.42	12.5	0.659	79.54	-2.35	23.86	-10.95	1.48	2.03
LCH10-187	13.6	63.5	0.38	12.2	0.803	80.17	-2.51	22.86	-8.57	1.10	1.01
LCH09-06	14.9	67.9	0.39	13.8	0.834	79.76	-1.54	20.77	-10.78	0.73	2.04
KS030887K-6	13.4	68.8	0.45	12.2	0.800	80.63	-2.97	24.43	-8.22	1.11	0.00
KS050278M-1	14.8	64.0	0.41	13.5	0.883	79.19	-2.46	23.91	-10.26	1.36	0.90
KS061406-LN~37	14.2	61.9	0.42	13.0	0.799	79.44	-2.40	23.60	-10.56	1.06	2.20
KS061406-LN~15	14.3	62.7	0.43	13.1	0.776	79.41	-2.01	22.31	-11.51	1.11	3.33
KS061406-LN~26	14.0	64.9	0.42	13.0	0.838	79.69	-2.12	22.10	-10.92	1.09	3.59
NE10478	14.7	66.4	0.42	13.7	0.793	79.79	-1.47	20.22	-10.33	0.90	1.96
NE10507	14.3	66.4	0.43	13.3	0.832	79.54	-2.16	23.27	-9.42	0.93	0.40
NE10589	14.8	66.3	0.52	13.6	0.810	81.23	-2.20	21.48	-9.05	0.95	1.66
NH11489	14.3	69.0	0.42	13.3	0.820	80.99	-2.34	22.19	-10.48	0.77	2.63
TX08A001249	13.9	67.0	0.42	12.6	0.872	79.81	-2.07	22.28	-9.81	0.83	1.45
TX08V7313	13.9	65.7	0.48	12.4	0.913	80.04	-2.60	23.58	-10.79	0.88	2.23
TX09A001194	14.1	65.6	0.46	12.6	0.891	81.29	-2.21	20.83	-12.43	1.03	3.26
TX09D1172	14.7	67.5	0.43	13.4	0.862	80.14	-2.36	23.57	-11.27	0.85	2.95
HV9W09-0746	14.3	65.7	0.45	13.0	0.976	79.92	-2.23	23.71	-11.86	0.89	3.31
HV9W09-0918	13.1	67.2	0.42	11.6	0.668	80.16	-2.38	22.20	-8.90	0.90	1.92
N11MD2172	14.8	66.5	0.44	13.3	0.754	80.54	-1.94	21.19	-8.85	0.68	1.53
N11MD2157W	13.9	66.7	0.43	12.6	0.709	80.65	-2.02	21.25	-10.99	0.52	3.59

2014 SRPN Intraregional Production Zone

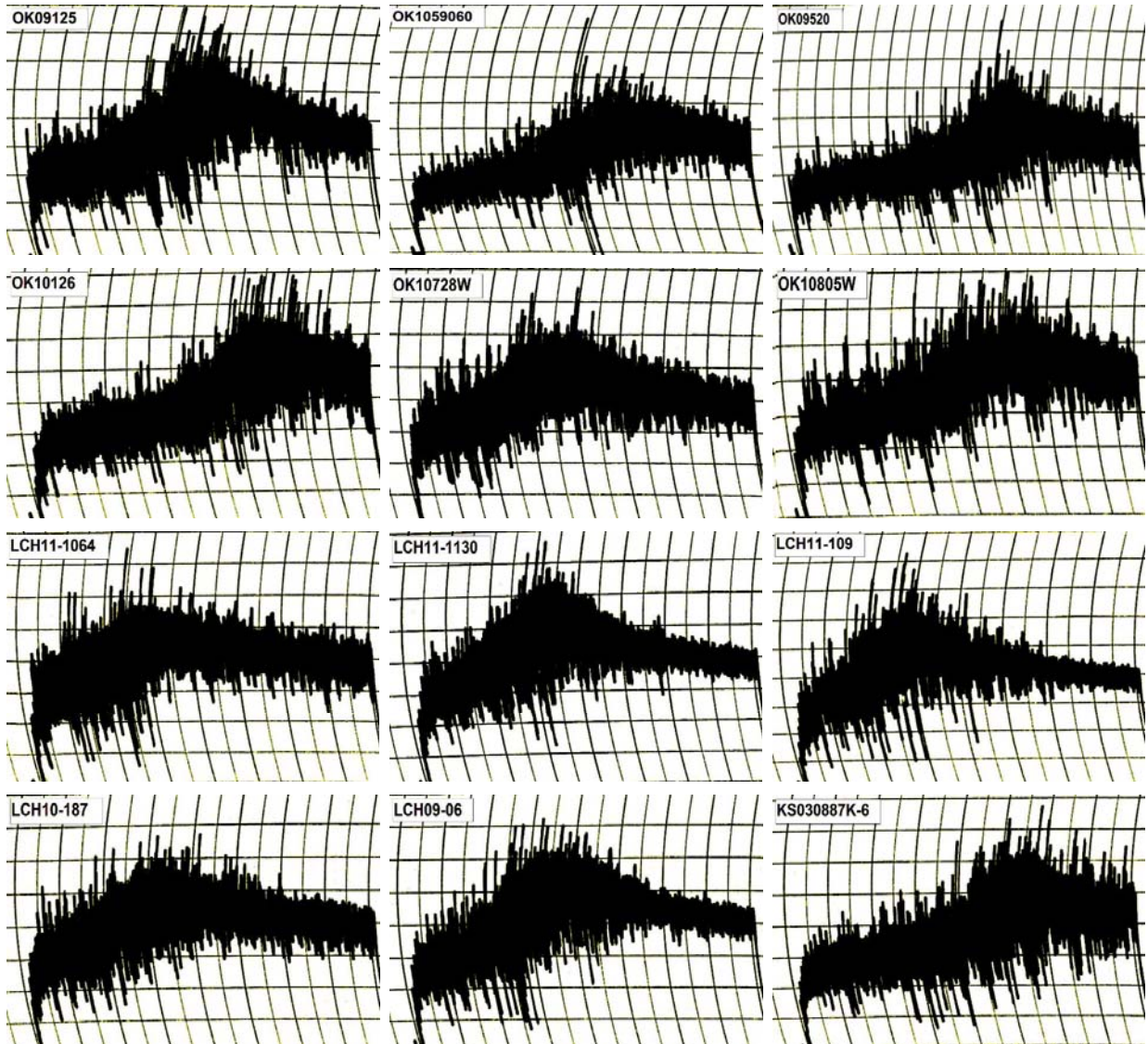
South Central Plains

	Flour Protein	Mixograph			
		Absorption	As-Is	Corrected	Tolerance
Line	(%)	(%)	(min)	(min)	
Kharkof	14.6	64.3	4.50	4.50	3
Scout 66	13.3	65.0	3.00	3.00	1
TAM107	12.5	62.8	3.63	3.63	4
Jagalene	13.2	63.0	4.38	4.38	4
KS10HW78-1-1	12.4	62.2	3.13	3.13	0
KS11HW39-5	12.4	61.6	3.88	3.88	0
KS11HW39-6	12.3	63.5	4.00	4.00	0
CO09W040-F1	11.7	62.4	3.75	3.60	0
CO09W009	11.8	61.1	5.38	5.24	3
CO11D174	12.8	62.2	6.38	6.38	4
CO11D346	11.8	62.7	3.50	3.42	0
CO11D446	12.3	62.4	9.50	9.50	5
OK09125	13.0	62.6	4.13	4.13	2
OK1059060	13.4	64.2	5.00	5.00	4
OK09520	12.5	61.3	6.38	6.38	4
OK10126	13.5	64.5	5.50	5.50	5
OK10728W	13.1	62.7	3.50	3.50	3
OK10805W	12.6	63.0	4.63	4.63	4
LCH11-1064	12.5	61.3	2.75	2.75	2
LCH11-1130	12.3	62.4	3.38	3.38	1
LCH11-109	12.5	63.9	3.00	3.00	0
LCH10-187	12.2	62.9	3.38	3.38	3
LCH09-06	13.8	63.5	3.50	3.50	1
KS030887K-6	12.2	61.8	5.50	5.50	4
KS050278M-1	13.5	63.5	2.75	2.75	0
KS061406-LN~37	13.0	64.6	4.38	4.38	4
KS061406-LN~15	13.1	64.7	3.50	3.50	4
KS061406-LN~26	13.0	64.7	3.00	3.00	2
NE10478	13.7	65.9	3.88	3.88	4
NE10507	13.3	63.1	4.25	4.25	4
NE10589	13.6	64.1	4.13	4.13	4
NH11489	13.3	65.0	3.50	3.50	2
TX08A001249	12.6	64.0	5.50	5.50	5
TX08V7313	12.4	63.6	4.00	4.00	4
TX09A001194	12.6	64.0	4.50	4.50	5
TX09D1172	13.4	63.3	3.88	3.88	4
HV9W09-0746	13.0	60.6	3.63	3.63	0
HV9W09-0918	11.6	59.3	2.25	2.15	0
N11MD2172	13.3	62.1	6.13	6.13	3
N11MD2157W	12.6	62.9	7.75	7.75	5

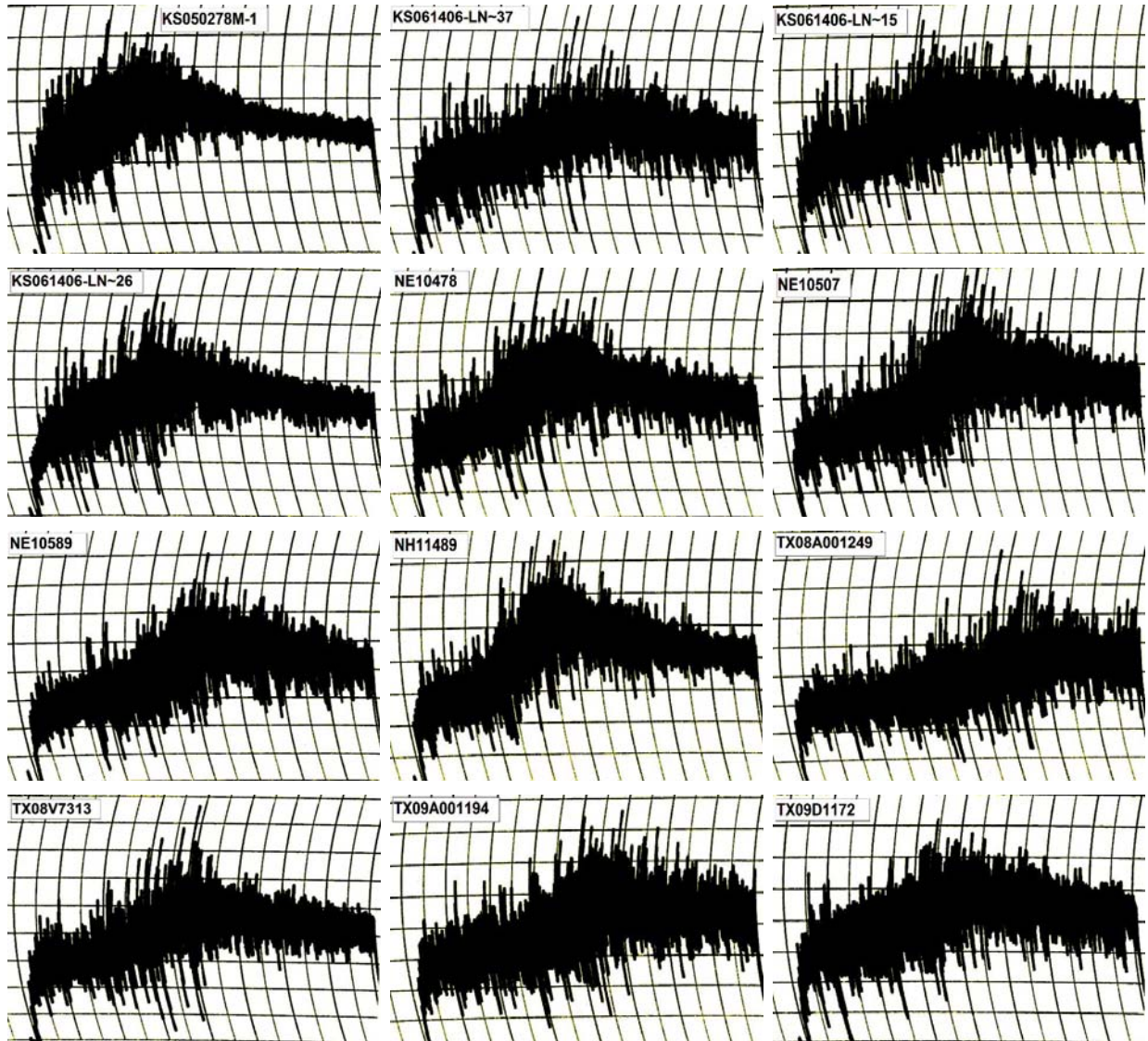
2014 SRPN Intraregional Production Zone South Central Plains



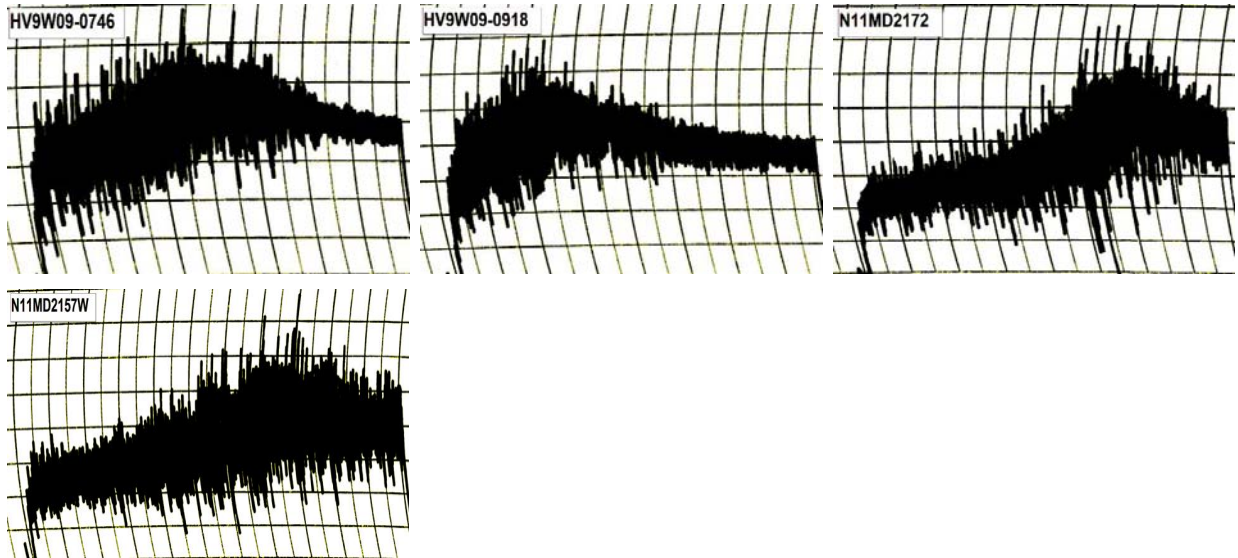
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2014 SRPN Intraregional Production Zone South Central Plains



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2014 SRPN Intraregional Production Zone

Southern Central Plains

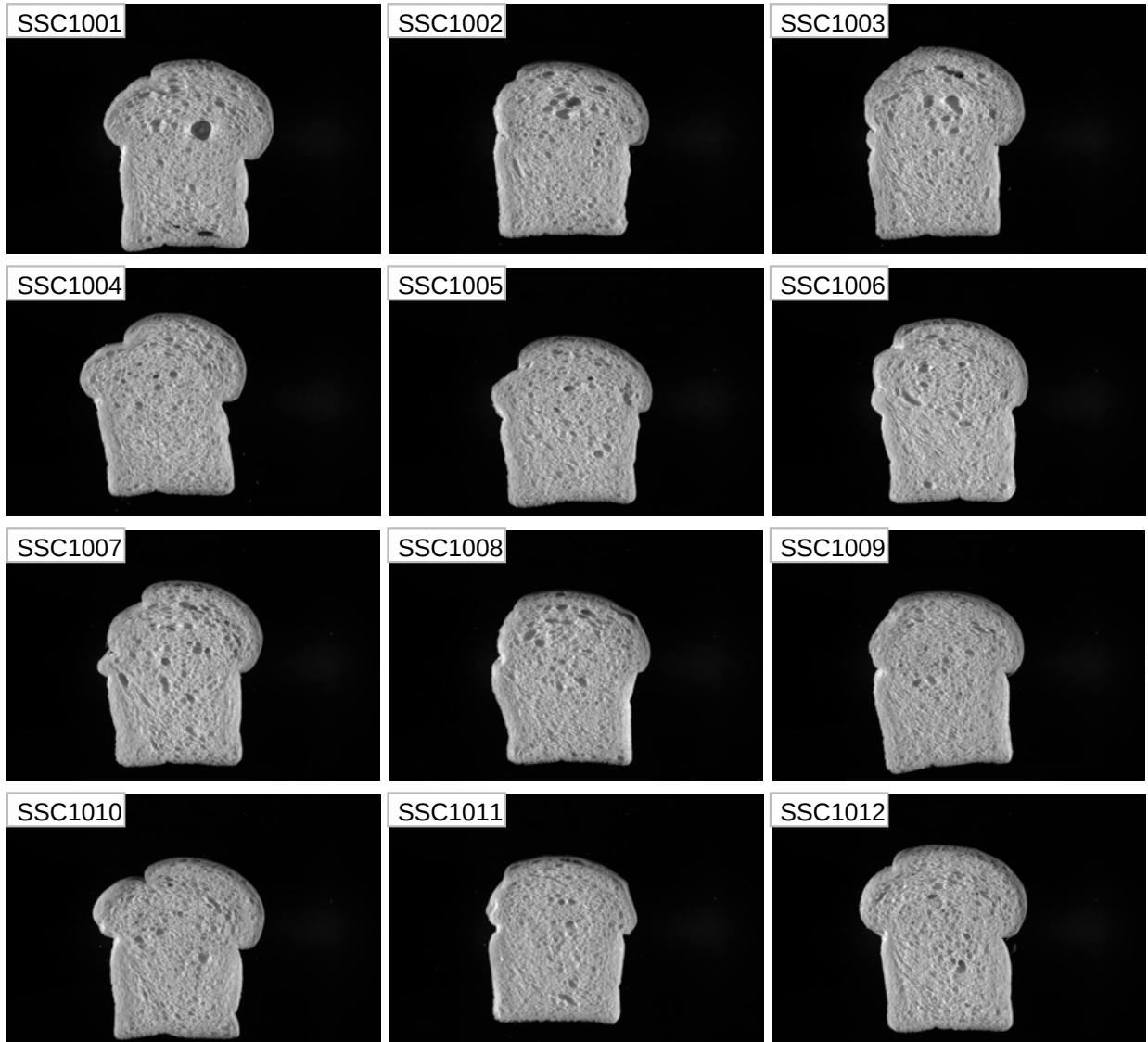
Line	RVA						
	Stirring Number (RVU)	Peak Viscosity (RVU)	Trough Viscosity (RVU)	Breakdown (RVU)	Final Viscosity (RVU)	Set back (RVU)	Peak Time (min)
Kharkof	122.50	242.42	152.08	90.33	270.83	118.75	6.27
Scout 66	106.25	188.92	110.83	78.08	219.75	108.92	5.93
TAM107	102.58	235.08	137.42	97.67	258.17	120.75	6.20
Jagalene	121.00	216.08	136.00	80.08	257.67	121.67	6.00
KS10HW78-1-1	81.75	165.83	59.83	106.00	130.08	70.25	5.47
KS11HW39-5	64.25	128.17	42.00	86.17	96.25	54.25	5.27
KS11HW39-6	62.25	123.42	38.75	84.67	89.42	50.67	5.20
CO09W040-F1	91.33	190.50	75.50	115.00	155.08	79.58	5.67
CO09W009	70.92	150.25	67.17	83.08	148.83	81.67	5.53
CO11D174	97.42	230.25	127.75	102.50	243.58	115.83	6.00
CO11D346	91.67	187.50	102.00	85.50	207.92	105.92	5.73
CO11D446	63.08	124.67	41.25	83.42	96.58	55.33	5.13
OK09125	92.58	212.50	131.83	80.67	249.25	117.42	6.07
OK1059060	119.50	215.42	135.25	80.17	251.17	115.92	6.13
OK09520	56.92	114.67	35.67	79.00	81.67	46.00	5.07
OK10126	85.83	168.33	54.67	113.67	120.50	65.83	5.40
OK10728W	92.33	178.17	89.00	89.17	188.17	99.17	5.73
OK10805W	78.42	110.50	37.67	72.83	89.83	52.17	5.33
LCH11-1064	84.50	152.33	68.67	83.67	148.67	80.00	5.60
LCH11-1130	49.92	102.25	26.33	75.92	60.92	34.58	5.00
LCH11-109	112.92	191.25	100.92	90.33	206.92	106.00	5.87
LCH10-187	60.67	121.00	42.00	79.00	97.17	55.17	5.20
LCH09-06	111.50	215.42	125.33	90.08	241.33	116.00	6.07
KS030887K-6	103.00	192.92	106.33	86.58	209.83	103.50	5.93
KS050278M-1	123.50	235.67	149.25	86.42	268.25	119.00	6.27
KS061406-LN~37	125.33	210.58	120.92	89.67	227.83	106.92	6.00
KS061406-LN~15	101.50	203.33	112.17	91.17	219.50	107.33	5.93
KS061406-LN~26	94.83	192.50	104.00	88.50	200.50	96.50	5.93
NE10478	122.08	204.17	138.17	66.00	261.42	123.25	6.13
NE10507	105.75	241.67	127.17	114.50	220.50	93.33	6.13
NE10589	133.83	227.58	146.33	81.25	270.67	124.33	6.20
NH11489	103.67	119.92	85.25	34.67	167.75	82.50	6.00
TX08A001249	114.50	258.42	151.83	106.58	270.25	118.42	6.20
TX08V7313	92.08	206.67	116.58	90.08	223.58	107.00	6.00
TX09A001194	63.00	129.42	46.33	83.08	106.67	60.33	5.33
TX09D1172	83.42	184.75	99.42	85.33	200.50	101.08	5.80
HV9W09-0746	97.67	214.00	123.42	90.58	232.08	108.67	6.07
HV9W09-0918	102.67	174.67	86.08	88.58	180.17	94.08	5.67
N11MD2172	96.08	196.42	110.92	85.50	220.33	109.42	5.93
N11MD2157W	61.17	124.08	32.92	91.17	77.08	44.17	5.07

2014 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	14.6	64.1	5.38	5.38	173.1	7.6	4.5	980	6.5	59
Scout 66	13.3	64.3	3.88	3.88	173.6	7.8	3.0	915	6.0	60
TAM107	12.5	62.4	3.75	3.75	170.9	7.6	3.0	990	6.8	73
Jagalene	13.2	64.0	6.00	6.00	173.6	7.7	3.5	980	6.6	67
KS10HW78-1-1	12.4	60.2	3.50	3.50	169.6	7.5	2.5	840	5.8	57
KS11HW39-5	12.4	59.2	4.13	4.13	169.2	7.4	3.0	925	6.3	67
KS11HW39-6	12.3	61.0	4.00	4.00	170.2	7.4	2.0	950	6.5	70
CO09W040-F1	11.7	61.4	3.63	3.49	170.5	7.3	3.0	860	5.8	64
CO09W009	11.8	60.9	7.25	7.05	169.9	7.6	4.0	955	6.5	75
CO11D174	12.8	62.9	7.88	7.88	171.9	7.5	4.5	980	6.7	70
CO11D346	11.8	63.2	4.50	4.39	172.5	7.3	2.5	835	5.5	61
CO11D446	12.3	62.2	11.88	11.88	170.3	7.7	5.0	990	6.8	74
OK09125	13.0	64.6	6.00	6.00	174.1	7.9	3.5	1025	6.8	73
OK1059060	13.4	63.3	5.50	5.50	172.9	7.5	5.0	925	6.2	60
OK09520	12.5	61.5	8.50	8.50	170.0	7.4	5.0	965	6.5	70
OK10126	13.5	63.5	6.75	6.75	172.3	7.8	4.0	995	6.7	66
OK10728W	13.1	62.4	4.25	4.25	171.7	7.7	4.5	960	6.5	66
OK10805W	12.6	62.6	5.50	5.50	171.9	7.7	4.0	940	6.4	67
LCH11-1064	12.5	60.5	3.25	3.25	170.7	7.0	1.0	910	6.1	64
LCH11-1130	12.3	61.5	3.50	3.50	170.8	7.2	2.0	890	6.0	64
LCH11-109	12.5	62.5	3.25	3.25	172.4	7.7	3.5	890	5.9	62
LCH10-187	12.2	62.8	3.88	3.88	172.5	7.8	3.5	1000	6.7	76
LCH09-06	13.8	62.8	4.50	4.50	172.9	8.1	4.5	1005	6.7	65
KS030887K-6	12.2	62.8	8.00	8.00	172.0	7.4	3.5	965	6.5	72
KS050278M-1	13.5	61.9	3.00	3.00	172.3	7.4	3.0	910	6.1	58
KS061406-LN~37	13.0	64.6	5.00	5.00	175.1	7.8	4.5	930	6.2	63
KS061406-LN~15	13.1	64.0	4.13	4.13	174.1	7.5	2.5	895	6.0	59
KS061406-LN~26	13.0	64.5	3.50	3.50	174.7	7.7	2.5	880	5.9	58
NE10478	13.7	65.4	4.63	4.63	175.3	7.9	4.5	985	6.6	64
NE10507	13.3	63.5	6.25	6.25	172.9	7.8	2.5	1065	7.3	74
NE10589	13.6	63.3	5.25	5.25	173.2	7.6	4.0	950	6.4	61
NH11489	13.3	63.9	4.63	4.63	173.7	7.3	5.0	890	5.9	58
TX08A001249	12.6	64.1	6.75	6.75	173.5	7.9	3.5	1080	7.3	81
TX08V7313	12.4	64.1	5.50	5.50	173.9	7.9	4.0	1020	6.9	77
TX09A001194	12.6	64.5	6.13	6.13	174.6	8.0	4.0	1080	7.3	81
TX09D1172	13.4	62.5	4.38	4.38	172.5	7.6	3.0	1035	7.0	71
HV9W09-0746	13.0	60.5	4.63	4.63	169.8	7.7	1.5	960	6.5	66
HV9W09-0918	11.6	58.6	2.50	2.38	168.8	7.0	1.5	785	5.3	56
N11MD2172	13.3	62.4	7.38	7.38	171.6	7.3	3.5	910	6.1	59
N11MD2157W	12.6	62.7	10.38	10.38	171.2	7.6	5.0	995	6.7	72

2014 SRPN Intraregional Production Zone South Central Plains



2014 SRPN Intraregional Production Zone South Central Plains

SSC1013



SSC1014



SSC1015



SSC1016



SSC1017



SSC1018



SSC1019



SSC1020



SSC1021



SSC1022



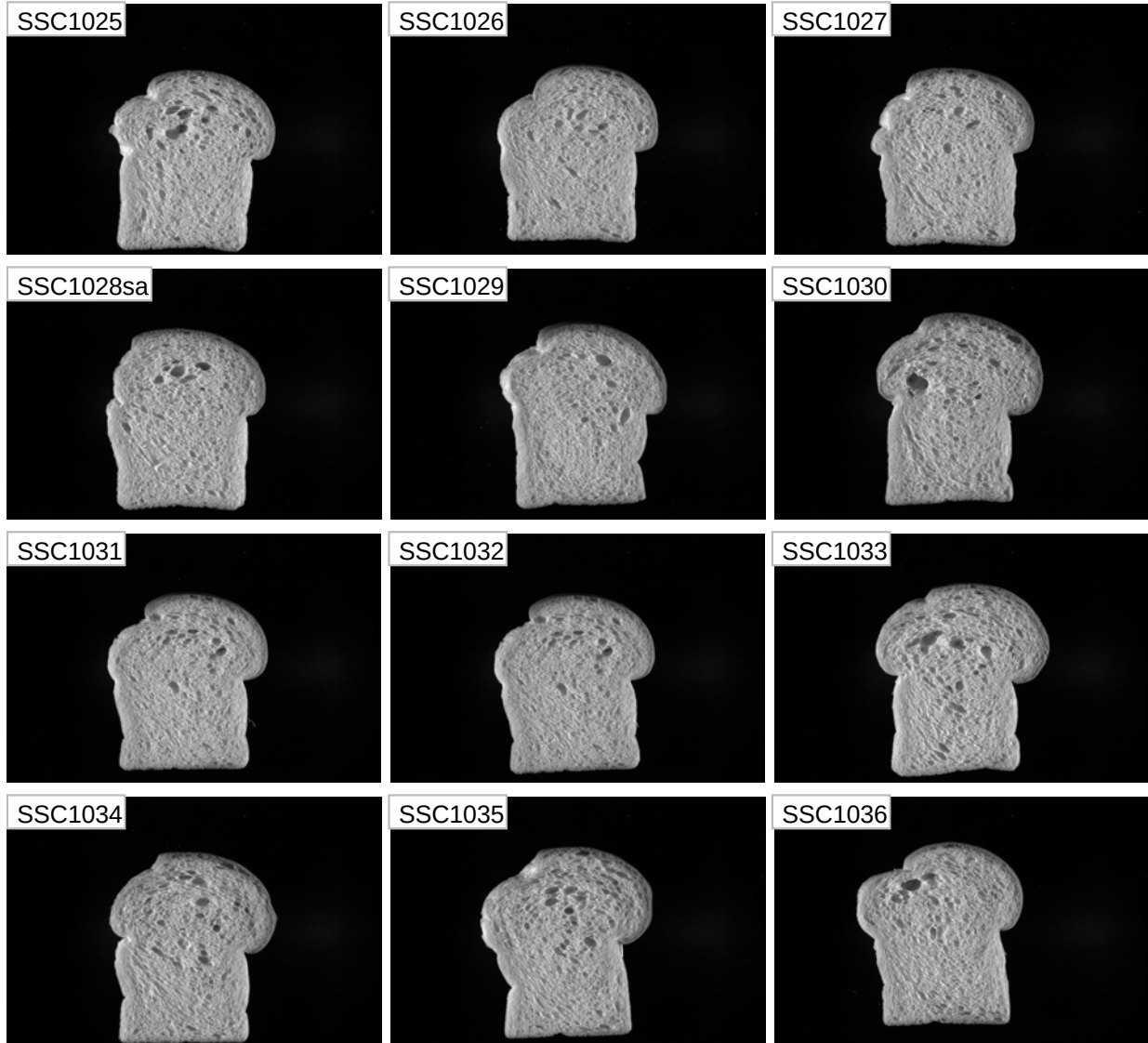
SSC1023



SSC1024



2014 SRPN Intraregional Production Zone South Central Plains



2014 SRPN Intraregional Production Zone South Central Plains

SSC1037



SSC1038



SSC1039



SSC1040





Hard Winter Wheat Quality Report 2014 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
Kharkof	44.6	Very Poor	68.6	46.2	Good	77.4		2,4,8,10,16,
Scout 66	60.7	Good	93.3	32.6	Very Poor	54.6		16,
TAM 107	54.5	Poor	83.8	46.2	Good	77.5	1AL	16,
Jagalene	58.2	Average	89.5	40.5	Average	67.9		9,16,
KS10HW78-1-1	65.1	Very Good	100.0	22.4	Very Poor	37.5		5,13,14,16,19,
KS11HW39-5	60.9	Good	93.7	34.7	Poor	58.1		16,
KS11HW39-6	61.5	Good	94.5	45.0	Good	75.4		16,
CO09W040-F1	62.7	Very Good	96.4	19.8	Very Poor	33.2		11,12,13,14,15,16,19,21,
CO09W009	64.5	Very Good	99.2	56.0	Very Good	93.8		11,13,16,17,
CO11D174	58.8	Average	90.4	42.6	Average	71.4		
CO11D346	60.4	Good	92.8	33.1	Poor	55.5		3,16,19,21,
CO11D446	60.3	Good	92.7	34.1	Poor	57.1		3,11,15,
OK09125	64.7	Very Good	99.5	51.9	Very Good	87.0		16,
OK1059060	62.4	Very Good	95.9	56.3	Very Good	94.3		16,
OK09520	64.9	Very Good	99.7	42.5	Average	71.2		5,
OK10126	59.5	Average	91.4	48.6	Good	81.5		16,
OK10728W	62.2	Very Good	95.6	32.6	Very Poor	54.6		16,
OK10805W	63.2	Very Good	97.1	57.5	Very Good	96.3		16,
LCH11-1064	53.4	Very Poor	82.1	23.3	Very Poor	39.1		12,15,16,17,18,21,
LCS Pistol	42.9	Very Poor	65.9	26.0	Very Poor	43.6		2,4,8,14,16,21,
LCH11-109	61.6	Good	94.7	40.5	Average	67.8		16,
LCH10-187	54.3	Poor	83.4	41.5	Good	69.6		16,
LCH09-06	57.2	Poor	87.9	40.5	Average	67.8		1,16,
KanMark	61.7	Good	94.9	38.3	Average	64.3		16,
KS050278M-1	53.7	Very Poor	82.6	36.9	Poor	61.9		1,2,4,14,16,
HotRod	49.2	Very Poor	75.7	35.5	Poor	59.4		3,8,16,
KS061406-LN~15	52.2	Very Poor	80.3	32.5	Poor	54.5		8,16,
KS061406-LN~26	52.3	Very Poor	80.3	30.2	Very Poor	50.7		14,16,20,
NE10478	58.1	Average	89.3	38.2	Average	64.0		16,
NE10507	56.8	Poor	87.3	40.0	Average	67.0		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 2014 SRPN-SHP

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

ID	Milling Score	Rating	%	Baking Score	Rating	%	1RS	Trait Deficiencies
NE10589	58.5	Average	90.0	42.6	Good	71.5		16,
NH11489	60.1	Average	92.3	32.7	Poor	54.9		16,
TX08A001249	59.2	Average	91.0	50.8	Good	85.2	1AL	
TX08V7313	58.0	Average	89.2	56.4	Very Good	94.5		10,
TX09A001194	60.6	Good	93.2	59.7	Very Good	100.0		9,10,
TX09D1172	57.3	Poor	88.1	50.2	Good	84.1		16,
HV9W09-0746	53.4	Very Poor	82.0	36.7	Poor	61.5		16,21,
HV9W09-0918	56.9	Poor	87.5	17.1	Very Poor	28.6		11,14,15,16,17,18,19,20,21,
N11MD2172	54.5	Poor	83.8	55.6	Very Good	93.2		16,
N11MD2157W	55.4	Poor	85.2	53.7	Very Good	89.9		14,15,

2014 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	61.1	11.1	0.4	25.4	6.4	2.39	0.23	43 17	MIXED	29--31--22--18--03	
Scout 66	60.9	11.1	0.4	31.3	7.3	2.59	0.29	50 15	MIXED	12--26--35--27--03	
TAM107	60.7	10.7	0.4	31.7	8.3	2.61	0.34	57 16	HARD	06--19--29--46--02	
Jagalene	61.8	10.9	0.3	30.8	7.6	2.68	0.32	56 15	HARD	06--18--33--43--02	
KS10HW78-1-1	62.3	11.1	0.4	34.4	8.1	2.76	0.36	59 15	HARD	04--16--31--49--01	
KS11HW39-5	61.9	10.9	0.4	30.3	7.2	2.56	0.32	49 15	MIXED	13--30--33--24--03	
KS11HW39-6	61.6	10.9	0.4	34.1	7.9	2.66	0.31	48 16	MIXED	15--33--30--22--03	
CO09W040-F1	62.1	10.8	0.4	33.1	8.0	2.63	0.33	43 15	MIXED	21--36--31--12--03	
CO09W009	63.2	11.0	0.3	34.2	8.0	2.65	0.34	49 14	HARD	10--33--35--22--02	
CO11D174	61.4	11.3	0.3	29.5	7.9	2.59	0.34	54 15	HARD	08--19--36--37--02	
CO11D346	61.4	11.3	0.4	32.5	8.9	2.57	0.33	49 15	MIXED	15--27--35--23--03	
CO11D446	61.1	11.4	0.3	31.3	8.7	2.55	0.34	52 17	MIXED	12--25--30--33--03	
OK09125	60.8	11.0	0.4	34.9	7.6	2.79	0.35	48 14	MIXED	12--33--33--22--03	
OK1059060	61.0	11.2	0.3	31.2	8.3	2.61	0.30	51 14	HARD	09--27--36--28--02	
OK09520	62.0	10.8	0.4	33.4	7.4	2.72	0.37	47 15	MIXED	17--31--33--19--03	
OK10126	60.9	11.0	0.3	30.2	7.2	2.64	0.32	56 15	HARD	06--16--37--41--02	
OK10728W	61.7	10.8	0.4	32.0	7.4	2.65	0.33	55 15	HARD	06--21--32--41--02	
OK10805W	61.2	11.4	0.3	31.8	6.9	2.68	0.30	63 14	HARD	03--08--23--66--01	
LCH11-1064	60.6	10.7	0.4	31.4	8.2	2.53	0.28	57 16	HARD	07--19--28--46--02	
LCH11-1130	61.4	10.5	0.3	27.5	8.1	2.47	0.30	42 24	MIXED	31--22--25--22--03	
LCH11-109	61.0	11.0	0.3	29.8	7.1	2.60	0.30	61 14	HARD	03--09--28--60--01	
LCH10-187	61.2	10.5	0.3	31.5	8.0	2.62	0.32	53 16	HARD	09--21--36--34--02	
LCH09-06	58.6	10.6	0.3	29.8	7.1	2.53	0.30	45 14	MIXED	16--38--28--18--03	
KS030887K-6	62.2	11.0	0.3	29.3	7.4	2.64	0.33	55 15	HARD	07--20--33--40--02	
KS050278M-1	59.8	11.0	0.3	25.7	6.2	2.48	0.25	58 15	HARD	05--17--28--50--01	
KS061406-LN~37	60.9	11.0	0.3	32.6	8.7	2.68	0.30	66 17	HARD	03--06--23--68--01	
KS061406-LN~15	61.1	11.2	0.3	33.5	8.0	2.71	0.30	69 18	HARD	01--10--17--72--01	
KS061406-LN~26	61.0	11.0	0.3	32.0	7.2	2.65	0.29	66 19	HARD	03--13--20--64--01	
NE10478	61.5	10.8	0.3	32.0	8.2	2.69	0.34	57 13	HARD	04--14--39--43--01	
NE10507	60.6	11.1	0.3	31.4	7.9	2.60	0.35	50 15	MIXED	11--29--35--25--03	
NE10589	60.8	10.9	0.3	29.1	6.0	2.62	0.26	52 14	HARD	09--24--35--32--02	
NH11489	61.4	10.8	0.3	27.8	6.9	2.56	0.31	51 15	HARD	10--26--37--27--02	
TX08A001249	62.7	10.6	0.4	29.2	7.5	2.54	0.31	61 16	HARD	03--13--29--55--01	
TX08V7313	62.9	11.4	0.3	30.5	7.9	2.63	0.31	67 14	HARD	01--06--19--74--01	
TX09A001194	62.6	11.2	0.4	34.1	8.0	2.67	0.33	61 15	HARD	03--12--30--55--01	
TX09D1172	62.0	10.9	0.4	31.6	7.7	2.61	0.31	62 17	HARD	05--09--27--59--01	
HV9W09-0746	60.4	11.1	0.4	28.3	6.8	2.52	0.27	54 15	HARD	07--21--34--38--02	
HV9W09-0918	60.5	11.2	0.3	28.8	7.3	2.54	0.32	59 14	HARD	04--13--31--52--01	
N11MD2172	60.4	11.1	0.3	27.9	7.4	2.53	0.28	52 16	HARD	09--29--31--31--02	
N11MD2157W	61.2	11.0	0.4	29.8	8.5	2.57	0.32	63 18	HARD	06--08--26--60--02	

2014 SRPN Intraregional Production Zone

Southern High Plains

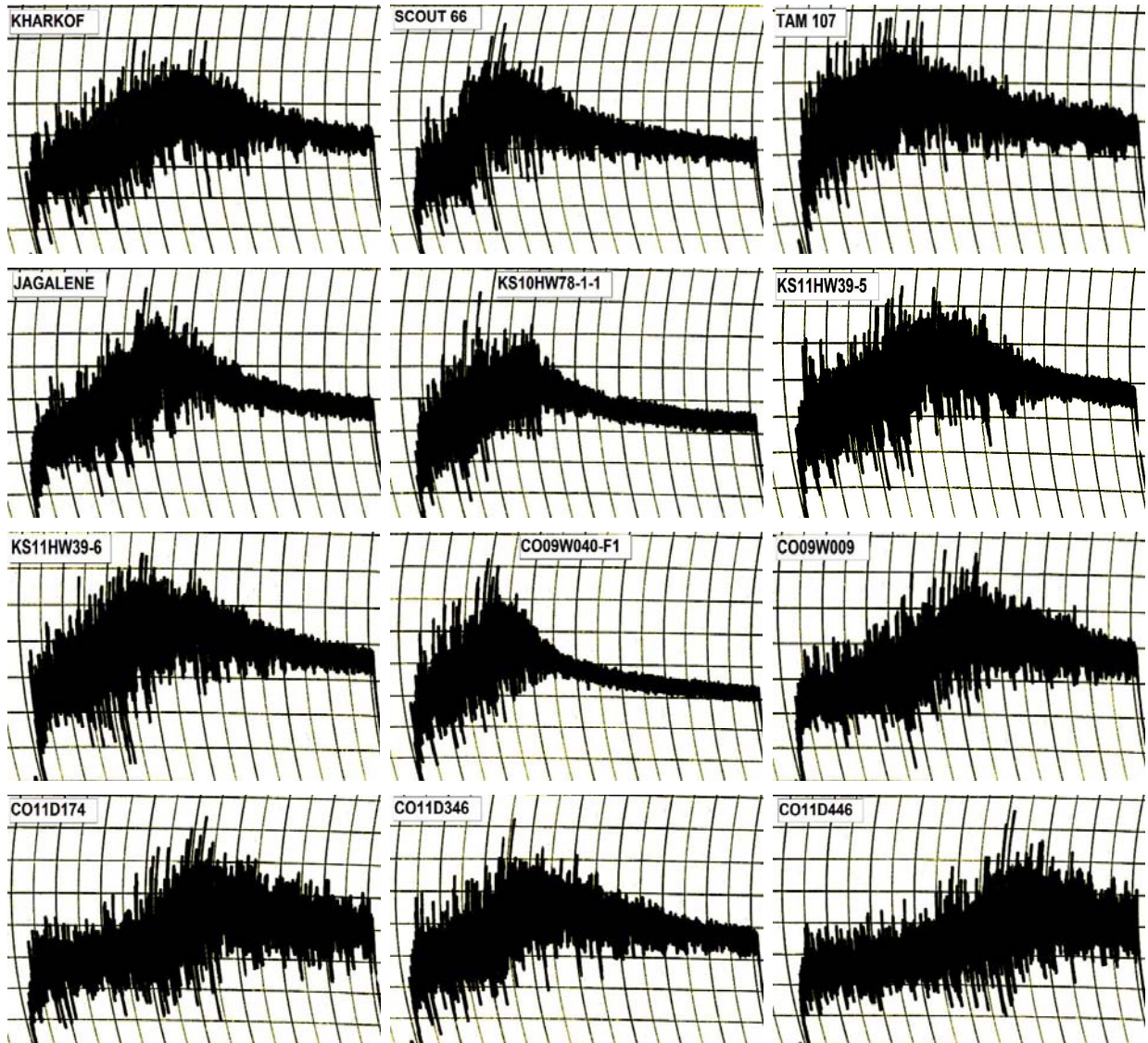
LINE	Wheat		Flour			Noodle Color					
	Protein	Milling Yield	Ash	Protein	PPO	L @ 0	a @ 0	b @ 0	Delta L 24 hrs	Delta a 24 hrs	Delta b 24 hrs
	(%)	(%)	(%)	(%)							
Kharkof	15.2	63.8	0.41	13.7	0.572	79.90	-1.65	23.05	-10.84	1.38	0.28
Scout 66	14.1	70.7	0.37	13.1	0.566	81.12	-1.48	21.04	-11.42	1.54	1.07
TAM107	13.5	67.8	0.39	12.1	0.579	79.84	-1.73	23.67	-10.45	1.59	0.95
Jagalene	14.3	69.8	0.46	13.2	0.537	79.84	-1.73	23.67	-10.88	1.31	-0.66
KS10HW78-1-1	12.4	72.4	0.44	11.4	0.531	80.31	-1.69	21.44	-11.55	1.78	1.54
KS11HW39-5	12.8	70.9	0.38	11.6	0.687	81.55	-2.04	21.25	-9.93	1.45	2.00
KS11HW39-6	12.7	69.9	0.31	11.4	0.655	80.95	-1.84	20.58	-8.84	1.30	2.43
CO09W040-F1	11.8	72.6	0.39	10.5	0.710	81.32	-2.21	22.01	-11.07	1.54	0.54
CO09W009	12.1	71.8	0.38	10.9	0.603	81.78	-2.08	22.35	-8.74	1.75	0.36
CO11D174	12.7	70.8	0.42	11.6	0.595	81.31	-1.76	21.81	-11.25	1.26	1.01
CO11D346	12.5	72.6	0.43	11.0	0.608	82.52	-1.72	20.54	-11.59	1.26	2.91
CO11D446	12.1	72.9	0.40	10.8	0.598	82.26	-1.47	19.73	-12.11	0.89	3.21
OK09125	12.9	71.8	0.35	11.7	0.540	80.91	-1.80	22.37	-10.55	1.18	2.02
OK1059060	13.8	72.2	0.39	12.7	0.609	80.35	-1.69	22.14	-14.06	1.75	0.39
OK09520	13.0	72.6	0.37	12.0	0.596	81.34	-1.74	21.84	-10.76	1.03	2.07
OK10126	14.1	70.3	0.42	13.1	0.449	80.79	-1.60	21.02	-12.44	1.70	-0.76
OK10728W	14.2	70.8	0.39	13.0	0.476	79.75	-1.94	23.63	-10.40	1.63	-0.15
OK10805W	13.2	70.2	0.41	12.2	0.534	81.40	-1.80	20.56	-11.77	1.64	1.88
LCH11-1064	13.6	67.5	0.42	12.5	0.557	79.04	-1.59	23.47	-12.35	1.50	-0.13
LCH11-1130	13.3	65.0	0.33	12.2	0.515	82.72	-1.89	19.79	-12.53	1.12	2.12
LCH11-109	12.7	69.9	0.39	11.4	0.493	80.77	-1.88	22.96	-9.96	1.38	1.63
LCH10-187	13.8	67.3	0.38	12.3	0.521	79.80	-1.92	22.77	-12.06	1.81	0.94
LCH09-06	14.2	70.5	0.38	13.0	0.667	79.50	-1.26	20.78	-12.11	1.38	1.13
KS030887K-6	12.7	71.6	0.42	11.8	0.572	80.67	-2.24	22.72	-9.85	1.57	-0.51
KS050278M-1	14.2	67.8	0.43	13.0	0.632	80.18	-1.98	21.43	-11.14	1.15	0.72
KS061406-LN~37	13.6	64.5	0.44	12.6	0.467	80.14	-2.09	22.93	-10.65	1.46	2.01
KS061406-LN~15	13.4	65.2	0.43	12.3	0.486	80.97	-1.96	22.00	-11.31	1.37	2.44
KS061406-LN~26	14.2	66.1	0.45	13.3	0.521	80.63	-1.95	22.91	-11.75	1.31	2.08
NE10478	13.7	68.5	0.41	12.7	0.600	80.49	-1.44	20.29	-10.67	1.15	1.06
NE10507	12.6	69.3	0.39	11.4	0.633	80.26	-2.21	22.41	-11.29	1.67	0.79
NE10589	13.9	68.7	0.42	12.7	0.623	80.52	-1.97	21.20	-9.41	1.23	1.32
NH11489	13.5	70.5	0.36	12.5	0.707	80.84	-1.98	21.61	-9.70	0.78	2.71
TX08A001249	13.5	69.0	0.38	12.4	0.535	80.66	-1.88	21.47	-11.60	1.35	2.09
TX08V7313	13.2	67.6	0.45	11.5	0.696	81.46	-2.09	21.67	-13.91	1.66	3.60
TX09A001194	13.3	69.8	0.45	11.9	0.673	81.20	-1.81	21.45	-12.05	1.33	2.76
TX09D1172	14.4	68.6	0.43	13.0	0.559	79.69	-1.95	23.73	-11.42	1.25	2.37
HV9W09-0746	14.1	67.7	0.44	12.9	0.749	78.66	-2.46	25.85	-10.91	1.74	-0.81
HV9W09-0918	12.5	68.9	0.40	10.9	0.464	80.61	-2.04	22.60	-10.04	1.50	1.40
N11MD2172	13.9	68.9	0.39	12.6	0.534	80.55	-1.87	21.11	-8.91	1.13	1.44
N11MD2157W	13.3	69.1	0.41	11.9	0.515	80.82	-2.08	22.62	-9.16	0.85	2.11

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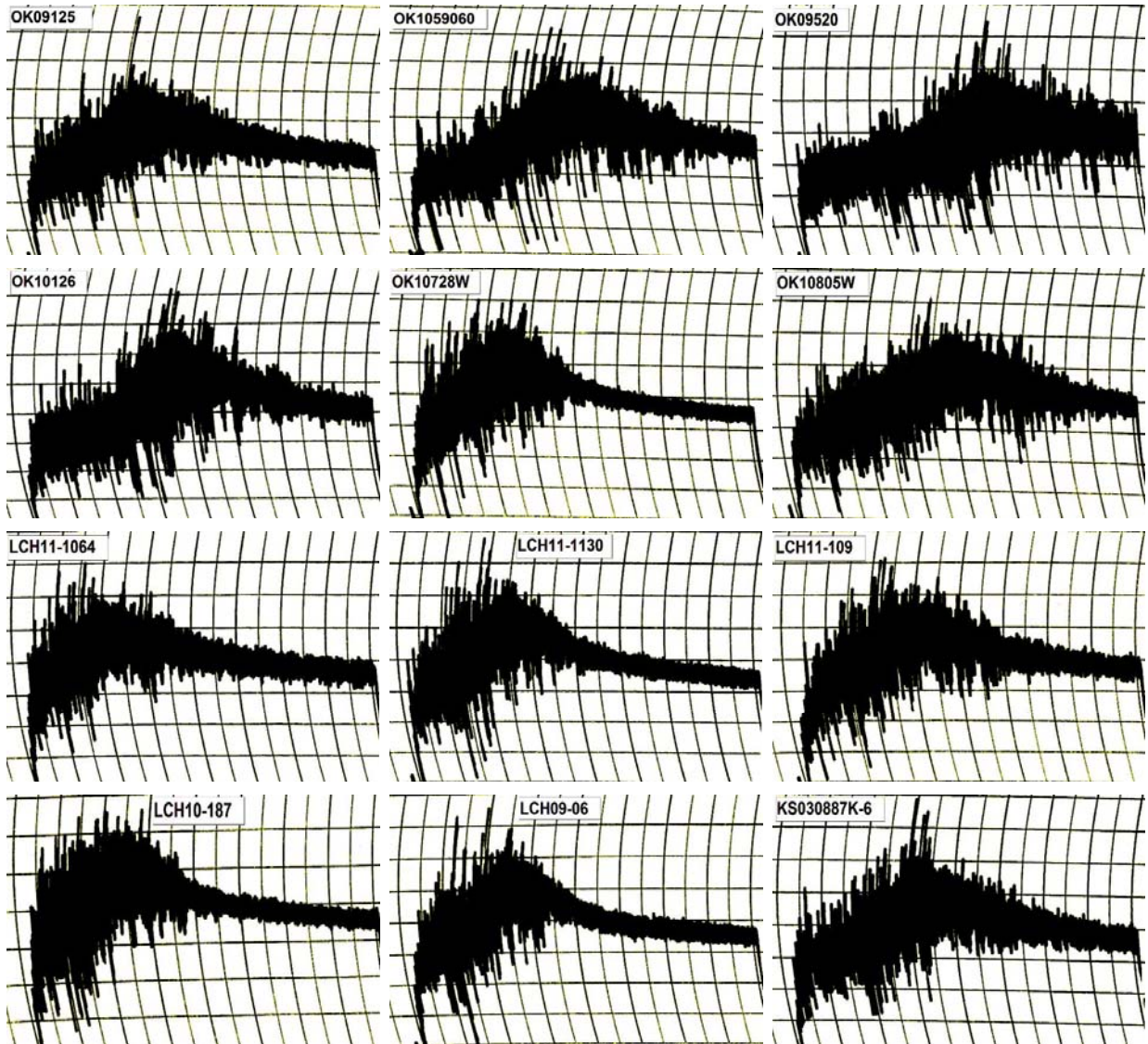
Southern High Plains

	Flour Protein	Mixograph			
		Absorption	As-Is	Corrected	Tolerance
Line	(%)	(%)	(min)	(min)	
Kharkof	13.7	64.7	3.63	3.63	0
Scout 66	13.1	64.8	2.50	2.50	0
TAM107	12.1	62.2	2.50	2.50	2
Jagalene	13.2	64.1	3.38	3.38	1
KS10HW78-1-1	11.4	60.5	2.75	2.56	0
KS11HW39-5	11.6	61.3	3.38	3.23	0
KS11HW39-6	11.4	62.0	2.63	2.44	0
CO09W040-F1	10.5	60.5	2.13	1.75	0
CO09W009	10.9	60.1	4.38	3.80	2
CO11D174	11.6	62.2	4.38	4.15	4
CO11D346	11.0	61.3	2.88	2.54	1
CO11D446	10.8	61.0	5.50	4.73	5
OK09125	11.7	62.4	2.63	2.53	0
OK1059060	12.7	64.2	4.00	4.00	1
OK09520	12.0	62.9	4.63	4.61	4
OK10126	13.1	64.8	3.63	3.63	1
OK10728W	13.0	62.5	2.38	2.38	0
OK10805W	12.2	64.3	3.88	3.88	1
LCH11-1064	12.5	60.8	2.00	2.00	0
LCH11-1130	12.2	62.2	2.50	2.50	0
LCH11-109	11.4	62.0	2.75	2.56	1
LCH10-187	12.3	62.0	2.38	2.38	0
LCH09-06	13.0	61.6	2.50	2.50	0
KS030887K-6	11.8	61.1	3.38	3.30	1
KS050278M-1	13.0	62.1	2.38	2.38	0
KS061406-LN~37	12.6	63.9	3.13	3.13	2
KS061406-LN~15	12.3	63.4	2.88	2.88	2
KS061406-LN~26	13.3	65.1	2.50	2.50	0
NE10478	12.7	64.1	3.13	3.13	2
NE10507	11.4	62.0	3.25	3.01	1
NE10589	12.7	62.7	2.75	2.75	0
NH11489	12.5	63.9	2.63	2.63	0
TX08A001249	12.4	63.7	3.50	3.50	3
TX08V7313	11.5	62.2	3.50	3.30	3
TX09A001194	11.9	62.8	4.00	3.94	4
TX09D1172	13.0	63.5	3.00	3.00	1
HV9W09-0746	12.9	60.9	3.13	3.13	0
HV9W09-0918	10.9	61.1	1.75	1.52	0
N11MD2172	12.6	63.0	4.13	4.13	2
N11MD2157W	11.9	62.8	5.50	5.44	5

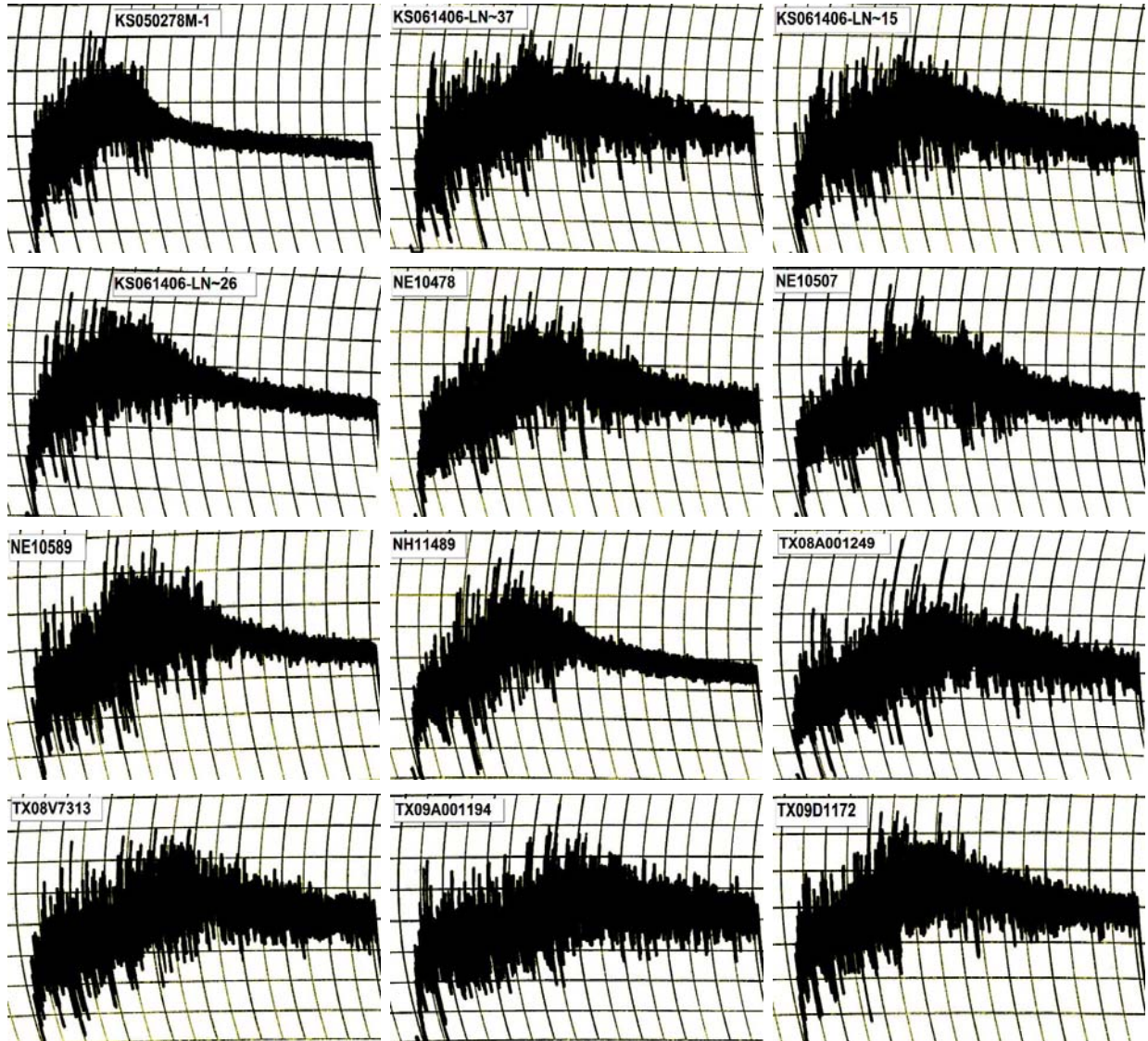
2014 SRPN Intraregional Production Zone Southern High Plains



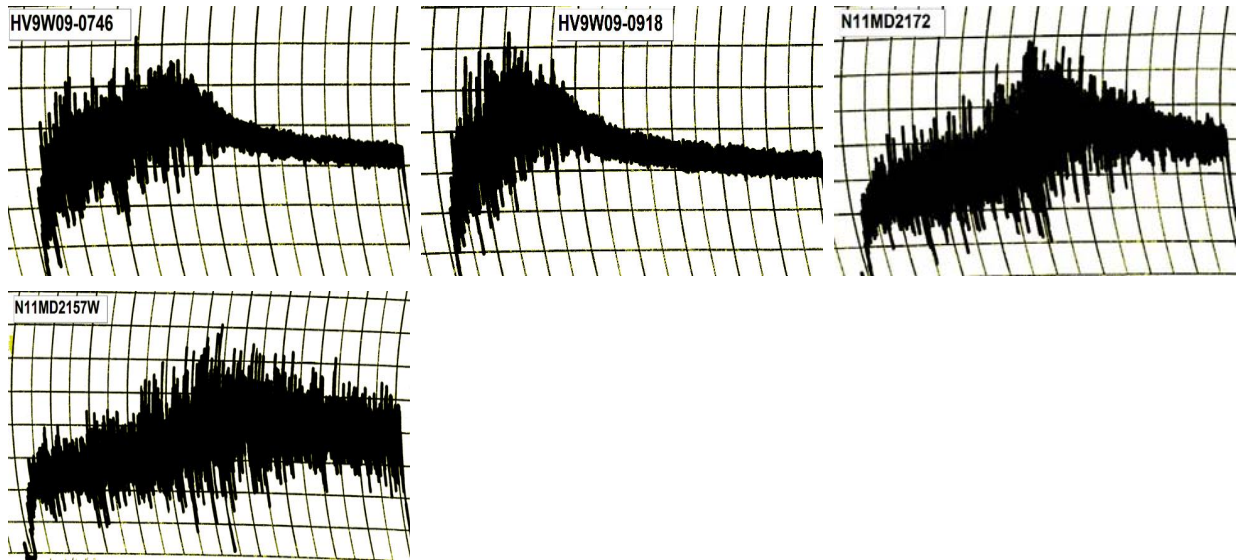
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Southern High Plains

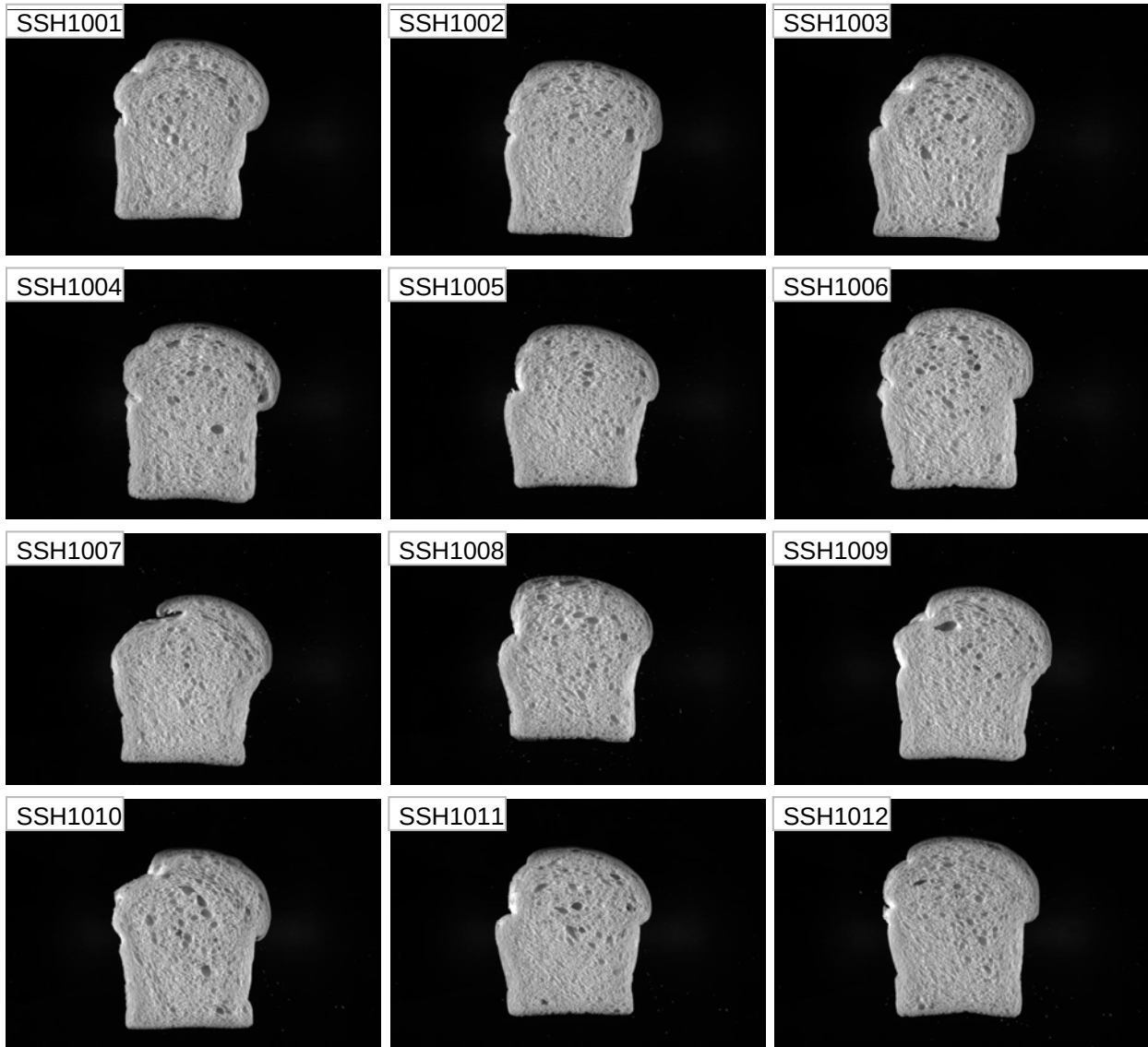
Line	RVA						
	Stirring Number (RVU)	Peak Viscosity (RVU)	Trough Viscosity (RVU)	Breakdown (RVU)	Final Viscosity (RVU)	Set back (RVU)	Peak Time (min)
Kharkof	150.17	250.58	185.67	64.92	315.67	130.00	6.47
Scout 66	94.25	240.17	154.42	85.75	283.75	129.33	6.13
TAM107	109.67	287.58	184.50	103.08	310.92	126.42	6.33
Jagalene	117.17	242.67	151.00	91.67	277.42	126.42	6.07
KS10HW78-1-1	96.83	306.08	177.17	128.92	296.58	119.42	6.13
KS11HW39-5	126.42	295.67	191.83	103.83	317.25	125.42	6.40
KS11HW39-6	91.75	286.92	191.08	95.83	320.75	129.67	6.40
CO09W040-F1	93.42	304.75	166.25	138.50	293.83	127.58	6.20
CO09W009	75.83	262.00	165.92	96.08	296.75	130.83	6.13
CO11D174	113.33	282.92	174.08	108.83	304.00	129.92	6.20
CO11D346	98.42	228.67	156.67	72.00	300.25	143.58	6.13
CO11D446	115.75	268.00	159.33	108.67	294.00	134.67	5.93
OK09125	106.50	269.83	177.92	91.92	307.33	129.42	6.27
OK1059060	100.08	255.25	161.83	93.42	291.75	129.92	6.13
OK09520	99.17	256.50	164.42	92.08	289.50	125.08	6.20
OK10126	107.42	290.50	149.17	141.33	266.83	117.67	5.93
OK10728W	103.67	263.58	166.17	97.42	299.92	133.75	6.13
OK10805W	130.92	268.42	172.92	95.50	300.17	127.25	6.27
LCH11-1064	103.33	261.00	172.33	88.67	290.00	117.67	6.40
LCH11-1130	97.00	280.75	182.25	98.50	305.58	123.33	6.40
LCH11-109	110.83	264.17	160.58	103.58	294.75	134.17	6.00
LCH10-187	125.92	260.17	166.00	94.17	289.83	123.83	6.27
LCH09-06	91.42	254.08	163.42	90.67	289.08	125.67	6.20
KS030887K-6	109.00	248.00	153.83	94.17	276.50	122.67	6.20
KS050278M-1	132.00	277.33	180.58	96.75	307.17	126.58	6.33
KS061406-LN~37	126.92	270.25	173.75	96.50	298.25	124.50	6.27
KS061406-LN~15	129.83	265.67	171.33	94.33	297.83	126.50	6.27
KS061406-LN~26	133.50	267.17	173.17	94.00	290.42	117.25	6.27
NE10478	128.17	215.33	139.17	76.17	263.75	124.58	6.00
NE10507	135.83	301.33	171.17	130.17	283.92	112.75	6.20
NE10589	103.58	247.00	166.67	80.33	297.08	130.42	6.27
NH11489	129.00	270.33	186.08	84.25	323.50	137.42	6.20
TX08A001249	132.33	296.92	186.33	110.58	302.92	116.58	6.40
TX08V7313	110.42	250.42	163.67	86.75	288.08	124.42	6.27
TX09A001194	118.42	276.58	176.92	99.67	307.42	130.50	6.27
TX09D1172	103.67	242.25	161.08	81.17	284.58	123.50	6.27
HV9W09-0746	119.58	265.08	177.25	87.83	302.33	125.08	6.33
HV9W09-0918	93.33	268.75	167.00	101.75	299.58	132.58	6.13
N11MD2172	106.58	255.67	172.75	82.92	309.50	136.75	6.27
N11MD2157W	131.50	286.33	164.83	121.50	293.33	128.50	6.00

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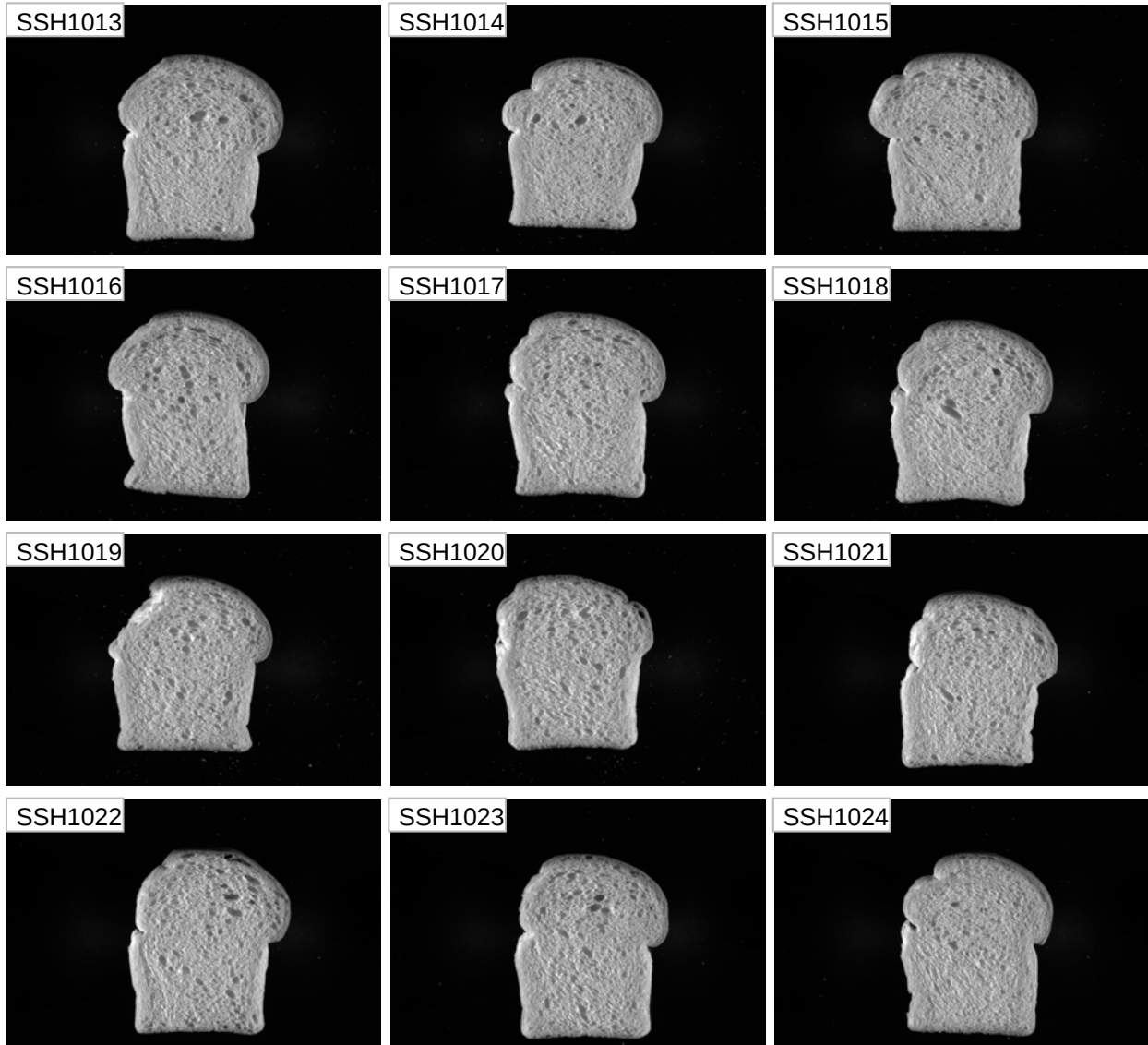
Southern High Plains

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	13.7	63.5	4.38	4.38	173.4	8.0	4.5	985	6.5	64
Scout 66	13.1	62.1	2.75	2.75	172.5	7.8	3.5	910	6.1	61
TAM107	12.1	62.3	3.13	3.13	172.2	7.7	3.0	960	6.5	72
Jagalene	13.2	63.1	3.50	3.50	173.0	7.9	2.5	950	6.4	63
KS10HW78-1-1	11.4	59.7	2.50	2.33	170.0	7.5	2.5	805	5.4	60
KS11HW39-5	11.6	60.9	3.50	3.35	170.9	7.4	3.5	920	6.2	72
KS11HW39-6	11.4	61.1	3.38	3.13	171.1	7.2	4.0	875	5.9	68
CO09W040-F1	10.5	58.9	2.38	1.96	170.0	7.3	1.5	815	5.5	68
CO09W009	10.9	59.9	4.88	4.24	169.6	7.2	5.0	885	6.0	73
CO11D174	11.6	61.9	5.63	5.33	171.6	7.4	2.5	955	6.5	76
CO11D346	11.0	60.8	3.63	3.20	169.9	7.1	2.0	815	5.5	64
CO11D446	10.8	60.6	6.88	5.91	170.5	7.6	3.5	925	6.3	79
OK09125	11.7	61.9	3.50	3.37	171.7	7.6	4.0	965	6.5	76
OK1059060	12.7	63.8	4.38	4.38	173.5	7.6	4.0	895	5.9	61
OK09520	12.0	63.2	6.25	6.23	172.8	7.5	4.5	975	6.5	75
OK10126	13.1	63.9	5.13	5.13	173.6	7.8	3.5	1000	6.6	69
OK10728W	13.0	62.1	2.75	2.75	171.6	7.9	2.5	930	6.2	63
OK10805W	12.2	62.9	4.25	4.25	173.3	7.8	4.0	935	6.3	69
LCH11-1064	12.5	59.5	2.63	2.63	169.3	7.0	1.5	855	5.8	58
LCH11-1130	12.2	61.1	2.50	2.50	170.8	7.1	1.5	855	5.7	61
LCH11-109	11.4	62.1	3.25	3.02	170.6	7.5	3.0	855	5.7	66
LCH10-187	12.3	60.1	3.00	3.00	169.7	7.7	3.0	940	6.3	69
LCH09-06	13.0	61.2	2.75	2.75	170.5	7.5	3.0	915	6.2	61
KS030887K-6	11.8	61.1	4.38	4.27	170.7	7.6	4.5	925	6.3	71
KS050278M-1	13.0	61.4	2.38	2.38	171.4	7.4	3.0	875	5.9	58
KS061406-LN~37	12.6	63.6	3.50	3.50	173.3	7.3	3.5	865	5.8	59
KS061406-LN~15	12.3	63.9	3.25	3.25	173.4	7.2	2.5	835	5.6	58
KS061406-LN~26	13.3	64.0	2.50	2.50	173.8	7.4	2.5	850	5.6	54
NE10478	12.7	64.3	3.25	3.25	173.4	7.6	4.5	915	6.1	64
NE10507	11.4	63.0	4.00	3.71	172.2	7.5	3.5	945	6.4	77
NE10589	12.7	62.2	3.50	3.50	172.9	7.7	3.0	875	5.8	59
NH11489	12.5	62.3	3.38	3.38	171.8	7.5	3.5	885	5.9	61
TX08A001249	12.4	65.0	4.25	4.25	174.5	7.9	3.5	1035	6.9	78
TX08V7313	11.5	63.8	4.63	4.36	173.3	7.7	3.0	965	6.5	78
TX09A001194	11.9	65.1	4.25	4.19	172.9	7.6	3.0	1005	6.7	79
TX09D1172	13.0	62.1	3.38	3.38	172.2	7.6	3.0	995	6.7	70
HV9W09-0746	12.9	60.1	3.00	3.00	169.8	7.7	2.0	915	6.1	62
HV9W09-0918	10.9	60.2	2.13	1.85	169.6	6.7	1.0	740	4.9	55
N11MD2172	12.6	64.3	5.88	5.88	173.7	7.5	4.0	915	6.1	64
N11MD2157W	11.9	64.4	8.13	8.05	173.7	7.3	5.0	925	6.1	70

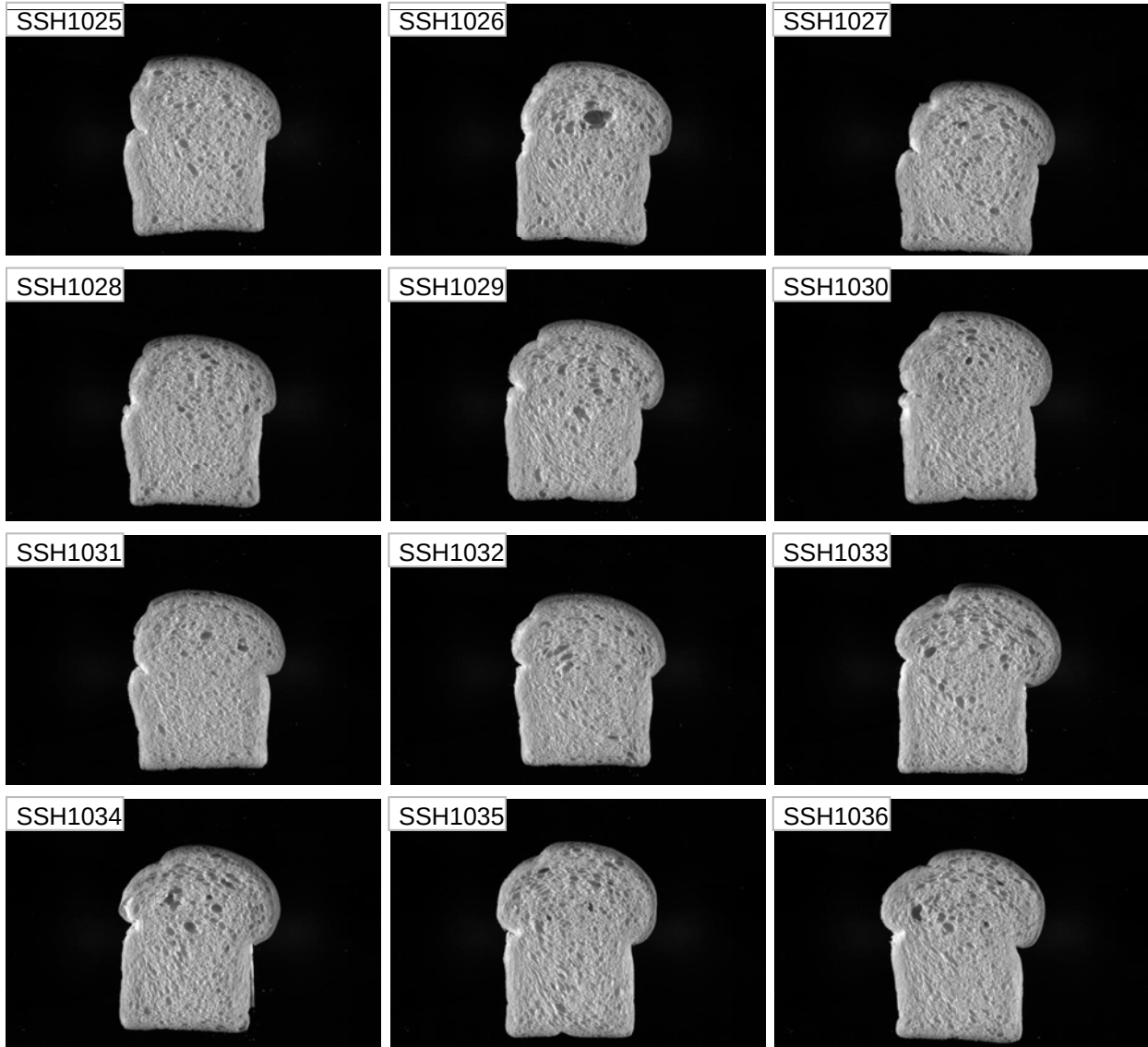
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Thank you for reviewing this report on milling and baking data of 2014 Regional Performance Nursery samples.
Please let me know if you have any comments on this report. I can be reached at (785) 776-2750 or by email,
Richard.chen@ars.usda.gov