

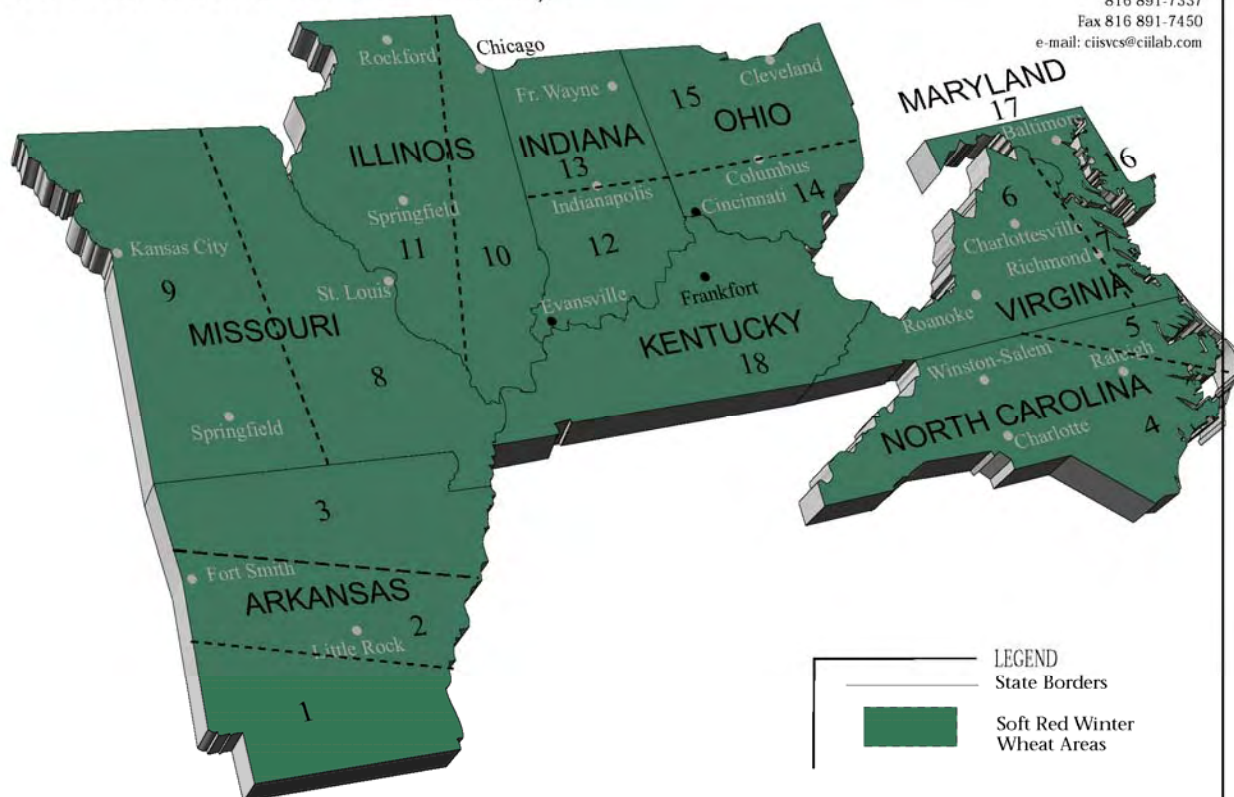
**Soft Red Winter Wheat
Quality Survey**

2007

Survey Overview

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Soft Red Winter Wheat

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CII Laboratory Services, Kansas City, Missouri, collected the soft red winter (SRW) samples and performed the quality evaluation except grade and single kernel analysis. Kansas Grain Inspection Service graded the samples. Kansas State University's International Grains Program performed single kernel analysis. U.S. Wheat Associates summarized the data.

The 18 areas shown above are used for reporting the results from approximately 350 SRW samples. Roughly half the samples in each area were collected early in harvest and half late, and samples for each time period were evaluated separately. The tests done on individual wheat samples include: test weight, moisture, protein, thousand kernel weight, ash, and falling number. An early and late composite was made for each area for the remaining analyses. The tables on the following pages summarize these individual sample and composite results in different ways.

This survey was funded by U.S. Wheat Associates and USDA's Foreign Agricultural Service.

SRW area map is reproduced with permission of CII Laboratory Services.

2007 Soft Red Winter Quality Summary

Soft Red Winter 2007 Survey - All Samples

	Composite Average			East Coast			Gulf Ports		
	2007	2006	5-Year	2007	2006	5-Year	2007	2006	5-Year
Wheat Grade Data									
Test Weight (lb/bu)	60.0	59.8	59.3	60.1	59.0	58.7	59.9	60.0	59.4
Test Weight (kg/hl)	78.9	78.7	78.0	79.0	77.7	77.3	78.9	79.0	78.2
Damage - Total (%)	0.2	0.9	1.3	0.2	2.3	1.8	0.2	0.6	1.2
Foreign Material (%)	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.0	0.1
Shrunken and Broken (%)	0.6	0.5	0.7	0.6	0.4	0.7	0.7	0.6	0.7
Total Defects (%)	0.9	1.5	2.0	0.8	2.8	2.5	0.9	1.1	1.9
Grade	1	2	2	1	2	2	2	1	2
Wheat Non-Grade Data									
Dockage (%)	1.0	0.8	0.8	0.7	0.5	0.8	1.1	0.8	0.8
Moisture (%)	13.1	12.8	13.0	13.1	13.1	13.2	13.1	12.7	13.0
Protein (%) 12%/0% mb	10.3/11.7	9.9/11.3	10.0/11.4	9.8/11.2	9.8/11.1	10.4/11.8	10.5/11.9	10.0/11.4	10.0/11.3
Wheat Ash (%) 14%/0% mb	1.55/1.80	1.46/1.70	1.56/1.81	1.47/1.71	1.34/1.56	1.53/1.77	1.58/1.83	1.49/1.73	1.57/1.82
1000 Kernel Weight (g)	33.3	33.7	32.9	33.8	35.7	32.8	33.2	33.1	32.8
Wheat Falling Number (sec)	343	318	348	339	264	337	344	333	351
Kernel Size (%) Ig/med/sm	81/18/01	85/14/01	83/16/01	81/18/01	90/10/00	81/18/01	81/18/01	84/15/01	83/16/01
Single Kernel Hardness	22.2	18.9	20.9	21.8	8.7	19.1	22.3	21.6	21.4
Single Kernel Weight (mg)	31.7	33.9	31.3	32.1	35.8	33.2	31.5	33.4	30.7
Single Kernel Diameter (mm)	2.22	2.34	2.19	2.22	2.38	2.31	2.22	2.32	2.18
Sedimentation (cc)	14.1	14.7	14.0	13.9	14.8	15.8	14.2	14.7	13.7
DON (ppm)	0.3	0.5	NA	0.2	0.5	NA	0.4	0.5	NA
Flour Data									
Flour Extraction Rate (%)	71.0	68.0	68.9	68.8	68.8	68.7	71.6	67.8	68.9
Flour Color - *L	93.4	93.5	93.1	93.5	93.2	93.1	93.4	93.5	93.1
Flour Color - *a	-3.1	-3.0	-3.2	-3.1	-3.1	-3.3	-3.1	-3.0	-3.1
Flour Color - *b	8.6	8.0	8.0	8.6	7.6	7.8	8.5	8.1	8.0
Flour Protein (%) 14%/0% mb	8.8/10.2	8.2/9.5	8.3/9.7	8.4/9.8	8.3/9.7	8.6/10.0	8.9/10.4	8.2/9.5	8.3/9.7
Flour Ash (%) 14%/0% mb	0.46/0.53	0.40/0.47	0.43/0.50	0.45/0.53	0.39/0.45	0.43/0.50	0.46/0.54	0.40/0.47	0.43/0.50
Wet Gluten (%)	23.1	21.8	21.7	19.3	18.9	21.5	24.3	22.6	21.8
Gluten Index	78.8	83.6	NA	83.1	91.7	NA	77.5	81.5	NA
Falling Number (sec)	352	307	339	342	260	327	356	319	342
Amylograph (65g) (BU)	672	446	517	681	234	450	669	501	535
Starch Damage (%)	4.8	4.0	4.4	4.8	4.0	4.2	4.8	4.0	4.4
Dough Properties									
Farinograph Peak (min)	2.0	1.7	1.5	1.9	1.6	1.8	2.0	1.7	1.5
Farinograph Stability (min)	3.4	3.0	3.0	3.2	2.7	3.1	3.5	3.1	2.9
Farinograph Absorption (%)	52.5	52.5	52.6	51.3	52.8	53.1	52.9	52.4	52.4
Alveograph P (mm)	42	39	36	44	44	41	42	38	36
Alveograph L (mm)	100	100	96	84	96	100	105	101	96
Alveograph W (10-4 joules)	107	92	89	98	109	104	110	88	86
Alveograph P/L	0.42	0.39	0.37	0.52	0.45	0.41	0.40	0.37	0.37
Baking Evaluation									
Crumb Grain	5.5	5.0	5.5	5.4	5.3	5.6	5.5	4.9	5.4
Crumb Texture	5.8	5.3	5.8	5.2	5.6	5.9	6.0	5.2	5.7
Loaf Volume (cc)	749	687	725	719	699	731	759	684	715
Cookie Spread Ratio	8.5	8.4	8.4	8.6	8.5	8.2	8.5	8.3	8.4
% Area Production	100.0%			23.6%			76.4%		

2007 State Summary

All Samples

	Arkansas	Missouri	Illinois	Indiana	Ohio	Kentucky	North Carolina	Virginia	Maryland
Wheat Grade Data - from Individual Samples									
Test Weight (Lab) (lb/bu)	60.0	57.4	58.3	58.8	60.0	59.2	59.4	60.2	59.7
Count	60	38	47	26	30	22	45	37	36
Wheat Grade Data - from Area Composite Samples									
Test Weight (lb/bu)	60.6	58.7	59.0	59.2	60.4	59.7	59.3	60.7	60.2
Test Weight (kg/hl)	79.8	77.3	77.6	77.9	79.5	78.6	78.0	79.8	79.2
Damage - Total (%)	0.2	0.3	0.2	0.2	0.2	0.0	0.4	0.4	0.0
Foreign Material (%)	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.3	0.0
Shrunken and Broken (%)	0.5	0.7	1.2	0.8	0.6	0.7	0.6	0.4	0.6
Total Defects (%)	0.8	1.1	1.4	0.9	0.8	0.8	1.1	1.1	0.6
Grade	1	2	2	2	1	2	2	1	1
Wheat Non-Grade Data - from Individual Samples									
Moisture (%)	12.9	13.3	12.3	14.1	13.4	12.9	13.6	12.5	13.4
Protein (%) 12%/0% mb	11.0/12.5	10.2/11.5	10.0/11.4	9.7/11.1	10.0/11.4	10.2/11.6	11.4/13.0	9.5/10.8	9.3/10.6
Ash (%) 14%/0% mb	1.6/1.88	1.6/1.85	1.6/1.89	1.5/1.71	1.5/1.69	1.6/1.87	1.5/1.75	1.5/1.70	1.4/1.68
1000 Kernel Weight (g)	35.8	29.5	28.9	33.5	33.6	32.7	33.3	33.7	34.0
Wheat Falling Number (sec)	347	324	356	329	342	354	354	360	324
DON (ppm)	0.1	0.7	1.4	0.3	0.1	0.3	0.1	0.4	0.1
Wheat Non-Grade Data - from Area Composite Samples									
Dockage (%)	1.2	1.2	1.3	1.4	0.4	1.6	1.0	1.0	0.5
Moisture (Lab) (%)	13.2	13.3	11.7	13.8	13.6	13.0	13.9	12.3	12.8
Protein (Lab) (%)	10.9	10.3	10.0	10.0	10.0	10.4	11.5	9.5	9.1
Kernel Size (%) lg/med/sm	88/12/00	75/24/01	66/33/01	84/15/01	85/15/00	78/21/01	80/19/01	77/22/01	83/16/01
Single Kernel Hardness	22.4	22.1	27.2	19.5	17.4	25.9	26.2	23.9	18.6
Single Kernel Weight (mg)	33.9	28.0	27.8	30.9	32.2	31.1	31.1	32.4	32.6
Single Kernel Diameter (mm)	2.35	2.09	2.06	2.17	2.19	2.20	2.21	2.27	2.22
Sedimentation (cc)	16.9	12.6	12.3	12.4	11.6	14.0	18.4	14.0	11.6
DON (ppm)	0.1	0.5	1.6	0.2	0.2	0.2	0.1	0.3	0.1
Flour Data									
Flour Extraction Rate (%)	72.1	72.7	71.3	73.1	71.3	68.3	67.0	70.8	69.2
Flour Color - *L	93.6	93.2	92.9	93.3	93.5	93.6	93.5	92.9	93.7
Flour Color - *a	-2.9	-3.2	-3.3	-3.3	-3.4	-2.9	-2.7	-3.4	-3.1
Flour Color - *b	8.5	8.1	8.9	8.4	8.6	8.8	8.4	8.9	8.6
Flour Protein (%) 14%/0% mb	9.5/11.1	8.6/10.0	8.5/9.9	8.5/9.9	8.3/9.6	9.0/10.4	9.9/11.5	8.4/9.7	7.7/9.0
Flour Ash (%) 14%/0% mb	0.46/0.54	0.50/0.58	0.47/0.55	0.49/0.57	0.42/0.48	0.46/0.53	0.46/0.53	0.46/0.53	0.45/0.52
Wet Gluten (%)	26.8	22.2	23.7	23.0	21.0	24.0	21.7	22.2	16.9
Gluten Index	82.4	70.4	64.8	67.0	80.8	86.0	72.5	88.6	86.5
Falling Number (sec)	367	361	352	323	333	366	363	354	328
Amylograph (65g) (BU)	631	653	753	559	671	790	760	735	622
Starch Damage (%)	5.2	3.9	5.0	3.9	4.1	5.8	3.7	4.4	5.5
Dough Properties									
Farinograph Peak (min)	2.4	1.7	1.6	1.5	1.5	2.5	2.8	1.8	1.4
Farinograph Stability (min)	3.7	3.2	3.3	3.8	3.2	3.5	3.2	3.3	3.1
Farinograph Absorption (%)	53.7	52.4	51.4	51.3	52.6	53.3	53.9	51.5	49.9
Alveograph P (mm)	40	42	40	46	41	49	48	42	43
Alveograph L (mm)	130	87	82	81	96	92	82	91	84
Alveograph W (10-4 joules)	123	96	94	100	105	116	105	90	97
Alveograph P/L	0.31	0.48	0.49	0.57	0.43	0.53	0.58	0.46	0.51
Baking Evaluation									
Crumb Grain	5.7	5.0	5.0	5.1	5.6	6.0	5.0	5.5	5.6
Crumb Texture	6.0	6.6	6.0	5.6	6.0	5.0	5.8	5.5	4.8
Loaf Volume (cc)	780	750	768	736	709	775	760	737	690
Cookie Spread Ratio	8.2	8.8	8.8	8.8	8.7	7.8	8.2	8.6	8.9

Soft Red Winter 2007 Survey - All Samples

	Arkansas			Missouri		Illinois		Indiana		Ohio		Kentucky	North Carolina		Virginia		Maryland	
	S	C	N	W	E	W	E	S	N	S	N		S	NE	W	E	W	E
Wheat Grade Data - from Individual Samples																		
Test Weight (Lab) (lb/bu)	60.3	60.6	59.0	57.8	57.2	57.9	59.2	58.1	59.7	58.4	61.1	59.2	58.9	60.2	59.5	60.8	59.5	59.7
Count	16	26	18	19	19	28	19	7	19	7	23	22	23	22	12	25	12	24
Wheat Grade Data - from Area Composite Samples																		
Test Weight (lb/bu)	60.2	61.5	59.8	58.9	58.6	58.7	59.7	58.6	60.0	59.0	61.3	59.7	58.5	60.5	60.2	61.1	60.7	60.1
Test Weight (kg/hl)	79.2	80.9	78.7	77.5	77.1	77.3	78.6	77.1	78.9	77.6	80.6	78.6	77.0	79.6	79.2	80.4	79.8	79.1
Damage - Total (%)	0.3	0.2	0.0	0.0	0.5	0.0	0.6	0.2	0.1	0.0	0.4	0.0	0.6	0.2	0.2	0.6	0.0	0.0
Foreign Material (%)	0.2	0.0	0.1	0.0	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.5	0.0	0.0
Shrunken and Broken (%)	0.5	0.3	0.8	0.7	0.7	1.3	0.8	0.8	0.7	0.7	0.5	0.7	0.7	0.5	0.3	0.5	0.2	0.7
Total Defects (%)	1.0	0.5	0.9	0.7	1.4	1.3	1.5	1.0	0.8	0.7	0.9	0.8	1.3	0.7	0.5	1.6	0.2	0.7
Grade	1	1	2	2	2	2	2	2	1	2	1	2	2	1	1	1	1	1
Wheat Non-Grade Data - from Individual Samples																		
Moisture (%)	13.1	12.9	12.7	13.5	13.2	12.2	12.4	14.9	13.2	13.6	13.3	12.9	13.5	13.8	12.5	12.5	13.9	13.2
Protein (%) 12% mb	10.9	11.0	11.2	10.0	10.3	10.1	9.7	9.5	10.0	10.4	9.8	10.2	12.1	10.4	9.7	9.4	9.9	9.2
Ash (%) 14% mb	1.58	1.60	1.66	1.56	1.62	1.65	1.56	1.45	1.50	1.44	1.46	1.61	1.50	1.52	1.45	1.47	1.40	1.46
1000 Kernel Weight (g)	37.3	37.1	32.7	29.3	29.7	28.1	31.2	34.0	32.9	32.1	34.5	32.7	32.3	34.9	33.4	34.0	34.2	33.9
Wheat Falling Number (sec)	338	353	347	323	325	356	353	332	325	348	338	354	357	348	360	360	337	320
DON (ppm)	0.0	0.1	0.0	0.5	0.9	1.7	0.8	0.5	0.1	0.2	0.1	0.3	0.0	0.3	0.4	0.4	0.3	0.1
Wheat Non-Grade Data - from Area Composite Samples																		
Dockage (%)	1.1	1.0	1.5	0.8	1.5	1.4	0.9	1.8	0.9	0.3	0.4	1.6	1.3	0.6	1.3	0.8	0.6	0.5
Moisture (%)	13.1	13.5	13.0	13.6	13.1	11.5	12.3	14.3	13.3	14.2	13.3	13.0	13.8	14.2	12.2	12.5	14.0	12.6
Protein (%) 12% mb	11.1	10.9	10.8	10.1	10.5	10.0	9.9	9.4	10.7	10.6	9.7	10.4	12.6	10.0	9.8	9.3	9.3	9.0
Kernel Size Large (Over 7) (%)	91	94	78	74	75	64	70	84	85	84	86	79	78	84	77	78	89	81
Kernel Size Medium (Over 9) (%)	9	6	21	25	24	35	29	16	15	15	14	21	21	16	23	21	10	18
Kernel Size Small (Thru 9) (%)	0	0	1	1	1	1	1	1	0	0	0	1	1	0	0	1	0	1
Single Kernel Hardness	20.6	20.1	27.1	24.3	20.5	27.1	27.5	19.6	19.3	13.8	19.6	25.9	25.6	27.2	22.2	25.4	21.8	17.9
Single Kernel Weight (mg)	34.4	36.0	30.6	27.2	28.5	27.7	28.2	31.3	30.4	31.5	32.7	31.1	29.8	32.9	32.1	32.6	35.1	32.0
Single Kernel Diameter (mm)	2.40	2.43	2.19	2.07	2.12	2.06	2.06	2.21	2.13	2.18	2.19	2.20	2.16	2.29	2.26	2.27	2.34	2.19
Sedimentation (cc)	17	19	14	12	13	12	13	12	13	11	12	14	22	13	14	14	10	12
DON (ppm)	0.1	0.0	0.1	0.5	0.6	2.0	0.4	0.3	0.1	0.1	0.3	0.2	0.1	0.1	0.2	0.3	0.0	0.1
Flour Data																		
Flour Extraction Rate (%)	72.1	72.7	71.2	71.2	73.7	71.6	70.3	72.8	73.5	70.4	71.9	68.3	67.1	66.8	73.2	68.8	69.0	69.2
Flour Color - *L	93.4	93.7	93.5	93.2	93.2	93.3	91.9	93.4	93.2	93.5	93.5	93.6	93.2	93.9	93.1	92.8	93.7	93.7
Flour Color - *a	-3.4	-2.7	-2.8	-3.2	-3.2	-3.3	-3.3	-3.4	-3.2	-3.2	-3.5	-2.9	-2.7	-2.8	-3.3	-3.5	-3.2	-3.1
Flour Color - *b	8.2	8.2	9.1	8.2	8.0	8.8	9.1	8.2	8.7	8.0	8.9	8.8	8.2	8.8	8.7	9.0	8.4	8.7
Flour Protein (%) 14% mb	9.8	9.5	9.3	8.7	8.6	8.4	8.9	8.0	9.1	8.7	8.0	9.0	10.4	9.1	8.6	8.2	7.8	7.7
Flour Ash (%) 14% mb	0.45	0.47	0.47	0.47	0.52	0.48	0.47	0.49	0.50	0.42	0.41	0.46	0.49	0.41	0.48	0.44	0.44	0.45
Wet Gluten (%)	27.4	26.9	26.2	23.1	21.6	22.1	28.2	21.6	24.7	23.6	19.5	24.0	20.7	23.1	21.7	22.7	18.0	16.6
Gluten Index	84.6	82.5	80.5	86.3	59.0	64.1	66.9	66.1	68.2	86.7	77.2	86.0	57.7	94.7	87.1	89.8	66.9	91.3
Falling Number (sec)	342	411	329	352	368	345	371	342	298	329	336	366	367	357	362	347	322	329
Amylograph (65g) (BU)	500	720	620	530	740	740	790	740	330	540	750	790	780	730	730	740	670	610
Starch Damage (%)	5.3	5.8	4.2	4.6	3.4	5.3	4.2	3.4	4.6	3.4	4.6	5.8	4.2	3.0	4.6	4.2	6.2	5.3
Dough Properties																		
Farinograph Peak (min)	2.0	3.0	2.0	2.0	1.5	1.5	2.0	1.5	1.5	1.5	1.5	2.5	3.0	2.5	1.5	2.0	1.0	1.5
Farinograph Stability (min)	3.5	4.0	3.5	3.5	3.0	3.0	4.0	4.0	3.5	3.5	3.0	3.5	3.0	3.5	3.0	3.5	3.5	3.0
Farinograph Absorption (%)	54.4	53.6	53.4	52.6	52.2	50.4	54.3	51.6	51.0	52.7	52.6	53.3	54.1	53.7	51.6	51.5	50.9	49.6
Alveograph P (mm)	38	43	39	50	37	31	66	49	42	50	36	49	44	53	39	44	52	41
Alveograph L (mm)	147	132	114	91	85	82	83	75	88	95	96	92	88	72	78	103	75	86
Alveograph W (10-4 joules)	132	132	102	113	84	72	154	109	89	127	92	116	101	112	73	105	111	94
Alveograph P/L	0.26	0.33	0.34	0.55	0.44	0.38	0.80	0.65	0.48	0.53	0.38	0.53	0.50	0.74	0.50	0.43	0.69	0.48
Baking Evaluation																		
Crumb Grain	5.0	6.0	6.0	5.0	5.0	5.0	5.0	6.0	4.0	5.0	6.0	6.0	5.0	5.0	6.0	5.0	4.0	6.0
Crumb Texture	6.0	6.0	6.0	6.0	7.0	6.0	6.0	6.0	5.0	6.0	6.0	5.0	5.0	7.0	5.0	6.0	4.0	5.0
Loaf Volume (cc)	825	775	750	750	750	775	750	725	750	700	715	775	750	775	750	725	650	700
Cookie Spread Ratio	8.1	8.0	8.7	8.0	9.4	9.1	8.2	9.4	8.2	8.4	8.8	7.8	8.3	8.0	9.3	8.1	8.3	9.1

N-North, S-South, E-East, W-West, C-Central, NE-North East, NA-Not Available

Soft Red Winter 2007 Survey - Early Samples

	Arkansas			Missouri		Illinois		Indiana		Ohio		Kentucky	North Carolina		Virginia		Maryland	
	S	C	N	W	E	W	E	S	N	S	N		S	NE	W	E	W	E
Wheat Grade Data - from Individual Samples																		
Test Weight (Lab) (lb/bu)	59.8	60.9	59.4	58.2	57.9	58.2	59.5	NA	59.1	58.4	61.2	59.4	58.7	60.3	58.9	60.8	60.0	59.5
Count	8	13	9	10	9	15	8	NA	8	3	8	12	13	12	6	12	6	12
Wheat Grade Data - from Area Composite Samples																		
Test Weight (lb/bu)	60.2	61.5	59.8	58.9	58.6	58.7	59.7	NA	59.4	59.0	61.5	59.7	58.5	60.5	60.2	61.1	60.7	60.1
Test Weight (kg/hl)	79.2	80.9	78.7	77.5	77.1	77.3	78.6	NA	78.2	77.6	80.9	78.6	77.0	79.6	79.2	80.4	79.8	79.1
Damage - Total (%)	0.3	0.2	0.0	0.0	0.5	0.0	0.6	NA	0.2	0.0	0.0	0.0	0.6	0.2	0.2	0.6	0.0	0.0
Foreign Material (%)	0.2	0.0	0.1	0.0	0.2	0.0	0.1	NA	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.5	0.0	0.0
Shrunken and Broken (%)	0.5	0.3	0.8	0.7	0.7	1.3	0.8	NA	0.6	0.7	0.6	0.7	0.7	0.5	0.3	0.5	0.2	0.7
Total Defects (%)	1.0	0.5	0.9	0.7	1.4	1.3	1.5	NA	0.8	0.7	0.6	0.8	1.3	0.7	0.5	1.6	0.2	0.7
Grade	1	1	2	2	2	2	2	NA	2	2	1	2	2	1	1	1	1	1
Wheat Non-Grade Data - from Individual Samples																		
Moisture (%)	13.1	13.2	12.8	13.7	13.2	12.2	12.6	NA	13.5	14.1	13.5	13.1	13.3	13.5	12.3	12.4	13.9	12.9
Protein (%) 12% mb	10.9	11.0	11.0	9.8	10.1	10.1	9.9	NA	9.6	10.4	9.9	10.6	12.3	10.1	9.9	9.4	9.0	9.0
Ash (%) 14% mb	1.57	1.59	1.62	1.49	1.58	1.68	1.58	NA	1.45	1.50	1.46	1.60	1.55	1.55	1.57	1.46	1.32	1.49
1000 Kernel Weight (g)	36.9	37.7	33.1	28.3	30.2	28.3	31.0	NA	31.9	32.0	33.7	33.6	33.2	35.5	33.1	34.8	35.7	33.4
Wheat Falling Number (sec)	338	356	342	342	346	355	351	NA	328	344	342	355	351	348	358	359	318	327
DON (ppm)	0.0	0.1	0.1	0.5	1.1	1.7	0.3	NA	0.1	0.2	0.0	0.3	0.0	0.1	0.1	0.2	0.0	0.1
Wheat Non-Grade Data - from Area Composite Samples																		
Dockage (%)	1.1	1.0	1.5	0.8	1.5	1.4	0.9	NA	0.7	0.3	0.6	1.6	1.3	0.6	1.3	0.8	0.6	0.5
Moisture (%)	13.1	13.5	13.0	13.6	13.1	11.5	12.3	NA	13.3	14.2	13.2	13.0	13.8	14.2	12.2	12.5	14.0	12.6
Protein (%) 12% mb	11.1	10.9	10.8	10.1	10.5	10.0	9.9	NA	9.7	10.6	10.1	10.4	12.6	10.0	9.8	9.3	9.3	9.0
Kernel Size Large (Over 7) (%)	91	94	78	74	75	64	70	NA	84	84	87	79	78	84	77	78	89	81
Kernel Size Medium (Over 9) (%)	9	6	21	25	24	35	29	NA	16	15	13	21	21	16	23	21	10	18
Kernel Size Small (Thru 9) (%)	0	0	1	1	1	1	1	NA	0	0	0	1	1	0	0	1	0	1
Single Kernel Hardness	20.6	20.1	27.1	24.3	20.5	27.1	27.5	NA	16.9	13.8	20.1	25.9	25.6	27.2	22.2	25.4	21.8	17.9
Single Kernel Weight (mg)	34.4	36.0	30.6	27.2	28.5	27.7	28.2	NA	31.2	31.5	33.2	31.1	29.8	32.9	32.1	32.6	35.1	32.0
Single Kernel Diameter (mm)	2.40	2.43	2.19	2.07	2.12	2.06	2.06	NA	2.16	2.18	2.23	2.20	2.16	2.29	2.26	2.27	2.34	2.19
Sedimentation (cc)	17	19	14	12	13	12	13	NA	11	11	14	14	22	13	14	14	10	12
DON (ppm)	0.1	0.0	0.1	0.5	0.6	2.0	0.4	NA	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.3	0.0	0.1
Flour Data																		
Flour Extraction Rate (%)	72.1	72.7	71.2	71.2	73.7	71.6	70.3	NA	73.4	70.4	72.5	68.3	67.1	66.8	73.2	68.8	69.0	69.2
Flour Color - *L	93.4	93.7	93.5	93.2	93.2	93.3	91.9	NA	92.9	93.5	93.7	93.6	93.2	93.9	93.1	92.8	93.7	93.7
Flour Color - *a	-3.4	-2.7	-2.8	-3.2	-3.2	-3.3	-3.3	NA	-3.2	-3.2	-3.5	-2.9	-2.7	-2.8	-3.3	-3.5	-3.2	-3.1
Flour Color - *b	8.2	8.2	9.1	8.2	8.0	8.8	9.1	NA	8.0	8.0	8.9	8.8	8.2	8.8	8.7	9.0	8.4	8.7
Flour Protein (%) 14% mb	9.8	9.5	9.3	8.7	8.6	8.4	8.9	NA	8.9	8.7	8.4	9.0	10.4	9.1	8.6	8.2	7.8	7.7
Flour Ash (%) 14% mb	0.45	0.47	0.47	0.47	0.52	0.48	0.47	NA	0.50	0.42	0.42	0.46	0.49	0.41	0.48	0.44	0.44	0.45
Wet Gluten (%)	27.4	26.9	26.2	23.1	21.6	22.1	28.2	NA	23.5	23.6	20.6	24.0	20.7	23.1	21.7	22.7	18.0	16.6
Gluten Index	84.6	82.5	80.5	86.3	59.0	64.1	66.9	NA	81.1	86.7	84.2	86.0	57.7	94.7	87.1	89.8	66.9	91.3
Falling Number (sec)	342	411	329	352	368	345	371	NA	297	329	283	366	367	357	362	347	322	329
Amylograph (65g) (BU)	500	720	620	530	740	740	790	NA	270	540	700	790	780	730	730	740	670	610
Starch Damage (%)	5.3	5.8	4.2	4.6	3.4	5.3	4.2	NA	4.6	3.4	4.6	5.8	4.2	3.0	4.6	4.2	6.2	5.3
Dough Properties																		
Farinograph Peak (min)	2.0	3.0	2.0	2.0	1.5	1.5	2.0	NA	2.0	1.5	2.0	2.5	3.0	2.5	1.5	2.0	1.0	1.5
Farinograph Stability (min)	3.5	4.0	3.5	3.5	3.0	3.0	4.0	NA	4.0	3.5	4.0	3.5	3.0	3.5	3.0	3.5	3.5	3.0
Farinograph Absorption (%)	54.4	53.6	53.4	52.6	52.2	50.4	54.3	NA	51.9	52.7	52.8	53.3	54.1	53.7	51.6	51.5	50.9	49.6
Alveograph P (mm)	38	43	39	50	37	31	66	NA	37	50	40	49	44	53	39	44	52	41
Alveograph L (mm)	147	132	114	91	85	82	83	NA	75	95	126	92	88	72	78	103	75	86
Alveograph W (10-4 joules)	132	132	102	113	84	72	154	NA	77	127	130	116	101	112	73	105	111	94
Alveograph P/L	0.26	0.33	0.34	0.55	0.44	0.38	0.80	NA	0.49	0.53	0.32	0.53	0.50	0.74	0.50	0.43	0.69	0.48
Baking Evaluation																		
Crumb Grain	5	6	6	5	5	5	5	NA	5	5	5	6	5	5	6	5	4	6
Crumb Texture	6	6	6	6	7	6	6	NA	5	6	5	5	5	7	5	6	4	5
Loaf Volume (cc)	825	775	750	750	750	775	750	NA	775	700	700	775	750	775	750	725	650	700
Cookie Spread Ratio	8.1	8.0	8.7	8.0	9.4	9.1	8.2	NA	8.4	8.4	8.4	7.8	8.3	8.0	9.3	8.1	8.3	9.1

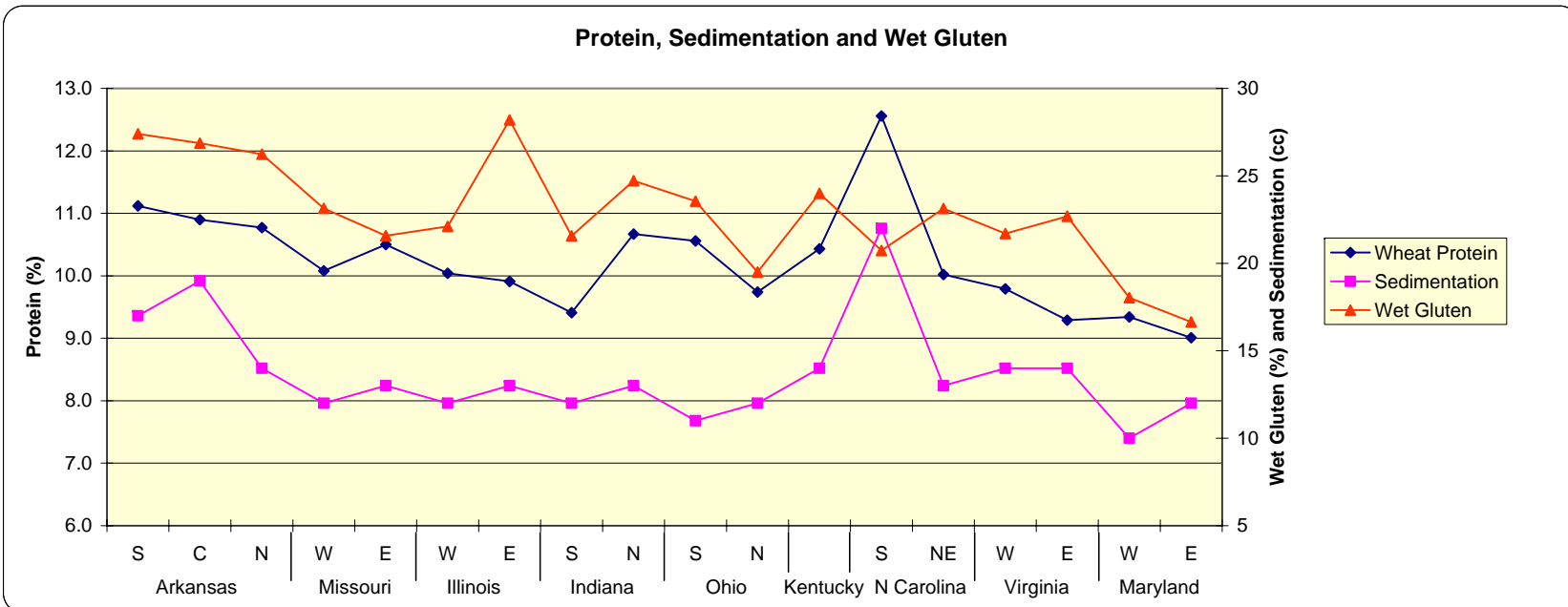
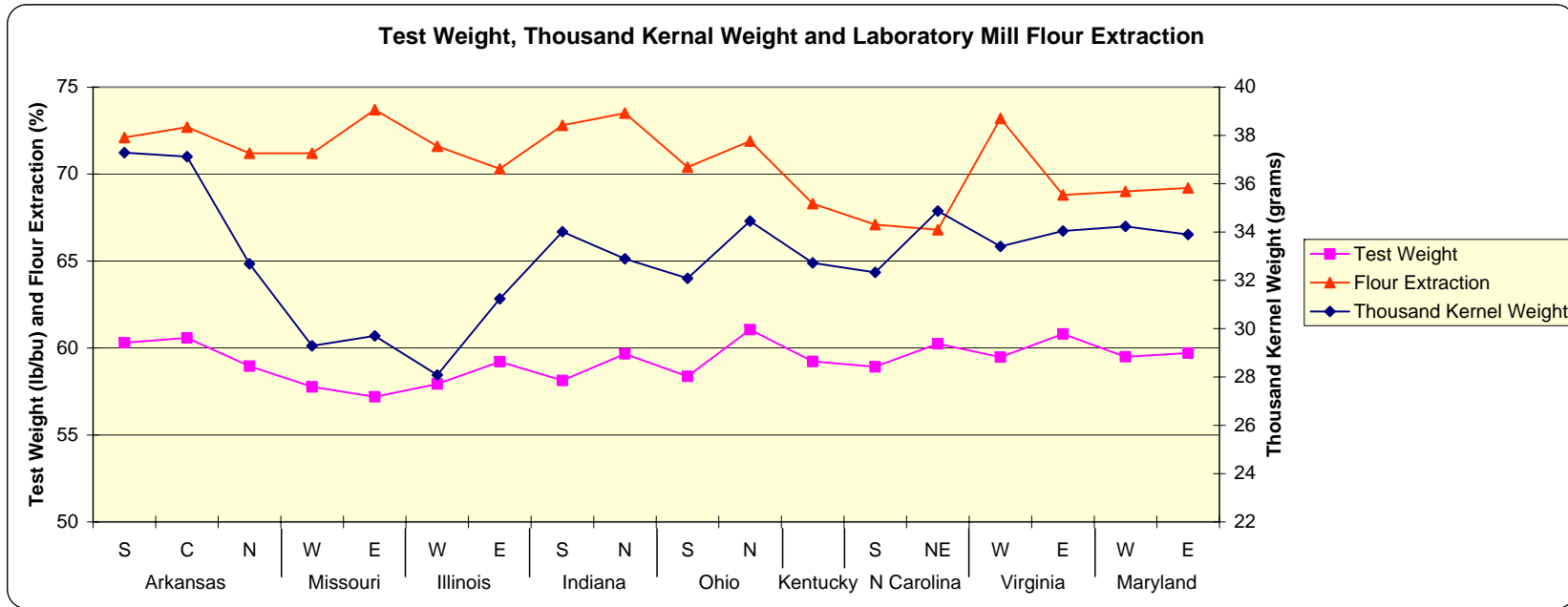
N-North, S-South, E-East, W-West, C-Central, NE-North East, NA-Not Available

Soft Red Winter 2007 Survey - Late Samples

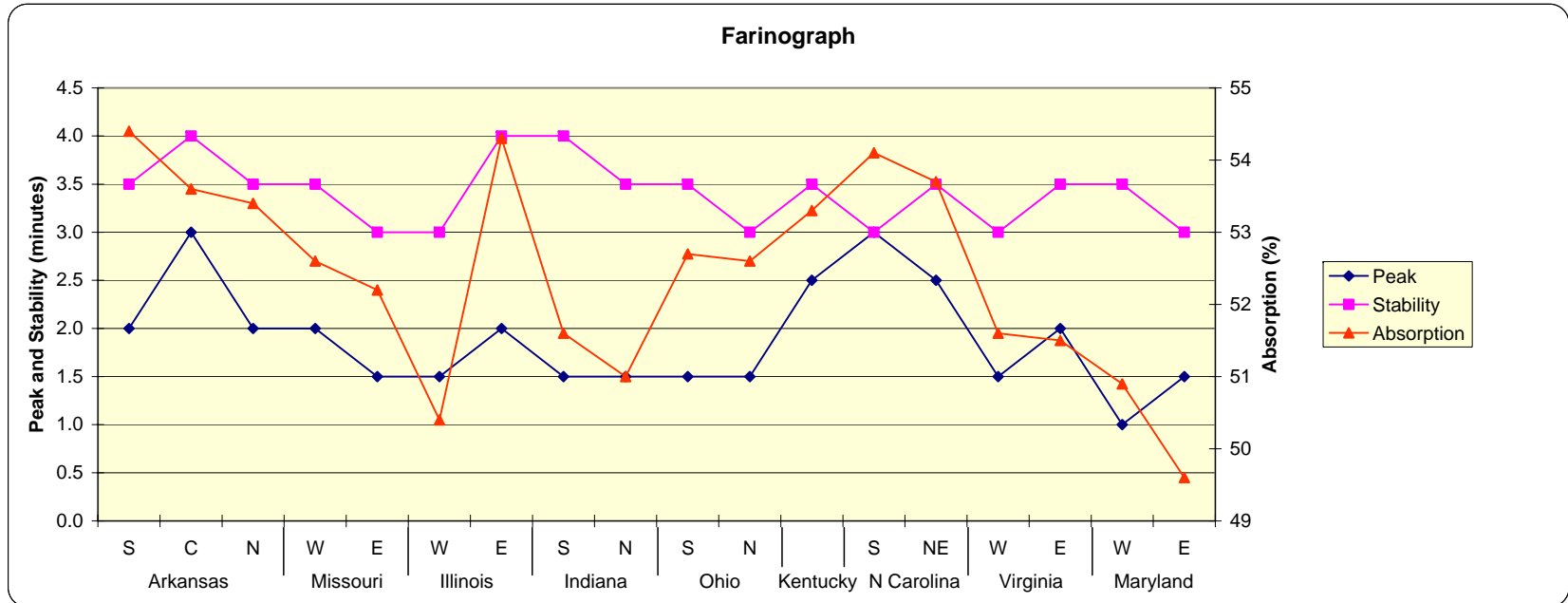
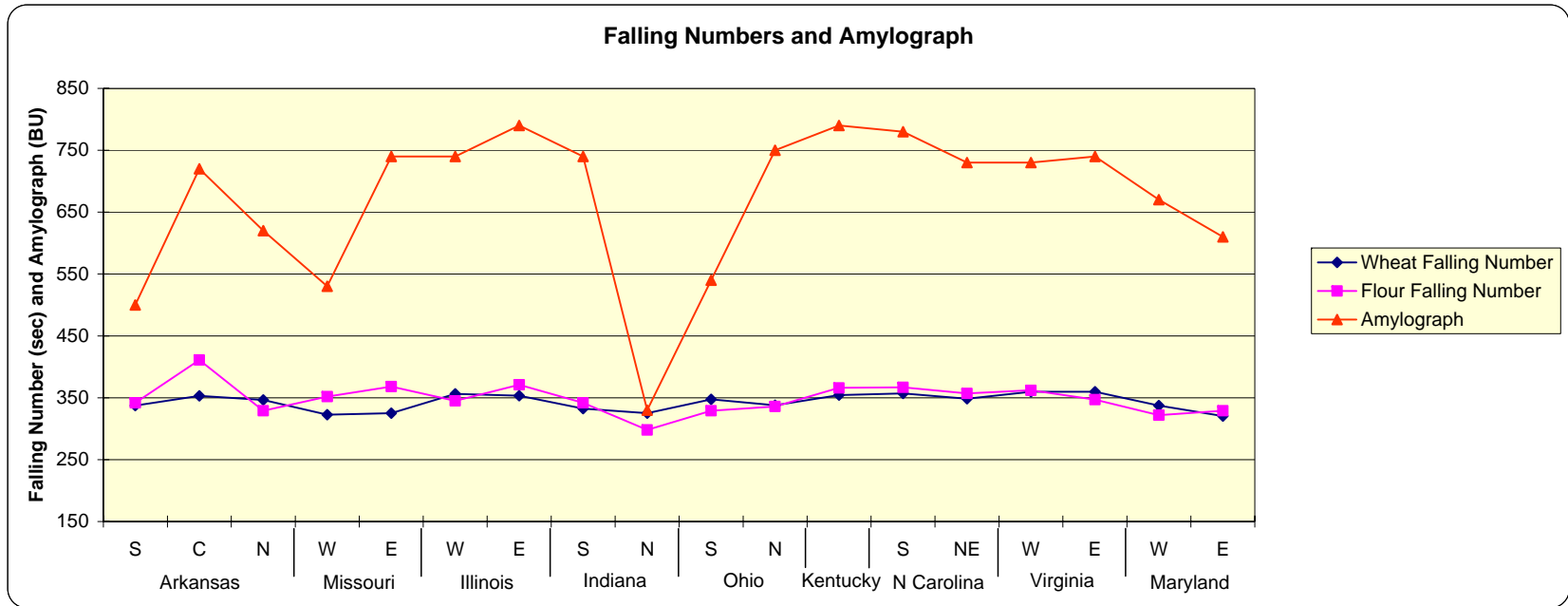
	Arkansas			Missouri		Illinois		Indiana		Ohio		Kentucky	North Carolina		Virginia		Maryland	
	S	C	N	W	E	W	E	S	N	S	N		S	NE	W	E	W	E
Wheat Grade Data - from Individual Samples																		
Test Weight (Lab) (lb/bu)	60.8	60.3	58.5	57.3	56.5	57.6	59.0	58.1	60.1	58.3	61.0	59.1	59.2	60.2	60.1	60.8	59.0	60.0
Count	8	13	9	9	10	13	11	7	11	4	15	10	10	10	6	13	6	12
Wheat Grade Data - from Area Composite Samples																		
Test Weight (lb/bu)	61.3	61.3	59.4	57.7	56.8	58.5	59.5	58.6	60.0	58.6	61.3	60.0	59.5	60.9	61.1	61.6	59.6	60.4
Test Weight (kg/hl)	80.6	80.6	78.2	76.0	74.8	77.0	78.3	77.1	78.9	77.1	80.6	78.9	78.3	80.1	80.4	81.0	78.4	79.5
Damage - Total (%)	0.3	1.0	0.2	0.7	0.5	0.4	0.5	0.2	0.1	0.3	0.4	0.2	0.3	0.2	0.5	0.3	0.9	0.3
Foreign Material (%)	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.1	0.0
Shrunken and Broken (%)	0.2	0.3	0.4	0.9	1.4	1.4	0.9	0.8	0.7	0.8	0.5	0.7	0.8	0.4	0.3	0.6	0.7	0.3
Total Defects (%)	0.5	1.3	0.7	1.6	2.0	1.8	1.4	1.0	0.8	1.1	0.9	1.0	1.3	0.7	0.8	0.9	1.7	0.6
Grade	1	1	2	3	3	2	2	2	1	2	1	1	2	1	1	1	2	1
Wheat Non-Grade Data - from Individual Samples																		
Moisture (%)	13.1	12.6	12.5	13.3	13.1	12.2	12.3	14.9	13.0	13.2	13.2	12.6	13.9	14.2	12.7	12.6	14.0	13.5
Protein (%) 12% mb	11.0	11.1	11.4	10.2	10.5	10.2	9.6	9.5	10.3	10.4	9.7	9.8	11.8	10.8	9.4	9.5	10.9	9.4
Ash (%) 14% mb	1.60	1.61	1.70	1.64	1.65	1.62	1.56	1.45	1.54	1.39	1.46	1.62	1.45	1.47	1.33	1.48	1.49	1.43
1000 Kernel Weight (g)	37.7	36.5	32.3	30.4	29.3	27.8	31.4	34.0	33.6	32.1	34.9	31.7	31.2	34.1	33.7	33.3	32.7	34.4
Wheat Falling Number (sec)	337	351	351	301	306	357	355	332	323	350	336	354	365	349	362	361	357	313
DON (ppm)	0.0	0.1	0.0	0.4	0.6	1.2	1.0	0.5	0.0	0.2	0.1	0.3	0.0	0.5	0.7	0.5	0.3	0.0
Wheat Non-Grade Data - from Area Composite Samples																		
Dockage (%)	0.8	0.7	0.7	1.0	0.9	1.6	2.3	1.8	0.9	0.5	0.4	1.0	1.3	0.4	0.5	0.6	1.2	0.8
Moisture (%)	13.4	12.7	13.0	13.7	12.4	11.5	12.3	14.3	13.3	14.0	13.3	12.6	13.6	14.3	12.6	12.4	14.2	13.5
Protein (%) 12% mb	10.7	10.7	11.0	10.5	10.8	9.9	9.6	9.4	10.7	10.7	9.7	9.9	12.3	11.0	9.7	9.3	10.8	9.6
Kernel Size Large (Over 7) (%)	91	89	78	80	81	65	72	84	85	77	86	77	77	81	80	83	82	86
Kernel Size Medium (Over 9) (%)	8	11	22	19	18	34	26	16	15	22	14	22	22	18	19	17	17	14
Kernel Size Small (Thru 9) (%)	0	0	1	1	1	1	1	1	0	1	0	1	1	1	1	0	0	0
Single Kernel Hardness	22.5	20.3	22.1	16.1	17.4	27.5	21.4	19.6	19.3	11.8	19.6	27.0	26.4	27.8	21.3	21.0	17.9	17.2
Single Kernel Weight (mg)	36.0	35.1	29.9	29.8	28.7	25.5	29.1	31.3	30.4	30.8	32.7	29.5	30.5	31.1	33.1	33.0	32.2	32.7
Single Kernel Diameter (mm)	2.44	2.40	2.13	2.14	2.10	1.95	2.08	2.21	2.13	2.10	2.19	2.11	2.20	2.22	2.28	2.23	2.19	2.19
Sedimentation (cc)	18	16	15	10	14	12	12	12	13	13	12	13	21	13	14	14	17	14
DON (ppm)	0.0	0.1	0.0	0.3	0.8	1.7	0.9	0.3	0.1	0.1	0.3	0.2	0.0	0.4	0.4	0.3	0.2	0.0
Flour Data																		
Flour Extraction Rate (%)	72.9	72.2	68.7	73.3	65.8	71.7	73.8	72.8	73.5	68.9	71.9	67.1	66.4	66.6	73.0	67.2	69.5	69.7
Flour Color - *L	93.4	93.7	93.8	92.8	93.6	93.1	92.9	93.4	93.2	93.6	93.5	92.3	93.5	93.8	92.8	92.4	93.2	93.4
Flour Color - *a	-3.4	-2.7	-2.8	-3.2	-3.0	-3.3	-3.3	-3.4	-3.2	-3.3	-3.5	-3.5	-2.8	-2.8	-3.2	-3.5	-3.4	-3.0
Flour Color - *b	8.5	8.2	8.6	8.0	8.3	8.5	8.4	8.2	8.7	8.1	8.9	9.4	8.5	8.7	8.7	9.6	8.4	8.5
Flour Protein (%) 14% mb	9.6	9.2	9.5	8.9	8.3	8.4	8.6	8.0	9.1	8.4	8.0	8.2	10.4	8.7	8.4	8.5	9.6	8.4
Flour Ash (%) 14% mb	0.47	0.49	0.44	0.55	0.43	0.50	0.43	0.49	0.50	0.40	0.41	0.45	0.43	0.40	0.48	0.50	0.42	0.40
Wet Gluten (%)	27.8	24.9	27.8	23.2	21.0	23.5	20.9	21.6	24.7	20.4	19.5	25.1	29.2	24.0	16.9	23.5	28.4	18.5
Gluten Index	80.2	69.0	54.7	81.6	61.1	55.6	76.3	66.1	68.2	85.6	77.2	87.4	56.3	76.1	99.1	92.7	83.9	91.9
Falling Number (sec)	336	367	352	289	296	367	346	342	298	378	336	372	382	355	360	373	339	327
Amylograph (65g) (BU)	460	680	770	180	320	680	670	740	330	620	750	750	890	760	680	790	560	440
Starch Damage (%)	4.6	4.9	4.6	4.6	4.9	4.6	4.9	3.4	4.6	3.4	4.6	4.6	3.8	4.2	4.2	5.3	5.8	4.9
Dough Properties																		
Farinograph Peak (min)	2.0	1.5	3.0	1.5	1.5	1.0	1.5	1.5	1.5	1.5	1.5	2.0	3.0	2.5	2.0	1.5	2.5	1.5
Farinograph Stability (min)	3.0	2.5	4.5	2.0	3.0	3.0	3.5	4.0	3.5	3.0	3.0	4.0	3.0	4.0	3.0	3.0	3.5	3.0
Farinograph Absorption (%)	53.5	52.8	53.5	51.5	51.3	51.9	50.7	51.6	51.0	51.4	52.6	50.2	55.1	53.1	52.7	50.8	54.2	50.9
Alveograph P (mm)	34	33	50	31	42	31	33	49	42	42	36	35	60	51	45	43	41	41
Alveograph L (mm)	133	109	91	91	92	67	76	75	88	88	96	103	101	88	65	86	108	88
Alveograph W (10-4 joules)	94	77	124	66	101	55	66	109	89	100	92	91	165	123	81	99	123	102
Alveograph P/L	0.26	0.30	0.55	0.34	0.46	0.46	0.43	0.65	0.48	0.48	0.38	0.34	0.59	0.58	0.69	0.50	0.38	0.47
Baking Evaluation																		
Crumb Grain	5	6	5	5	6	5	5	6	4	6	6	5	6	6	5	6	5	5
Crumb Texture	5	5	5	5	5	5	6	6	5	7	6	6	7	7	6	6	6	5
Loaf Volume (cc)	775	750	725	725	700	725	750	725	750	750	715	750	800	750	750	725	725	725
Cookie Spread Ratio	7.9	8.4	8.3	8.6	8.7	9.1	9.3	9.4	8.2	8.6	8.8	8.0	7.5	8.3	8.9	9.6	8.1	8.6

N-North, S-South, E-East, W-West, C-Central, NE-North East, NA-Not Available

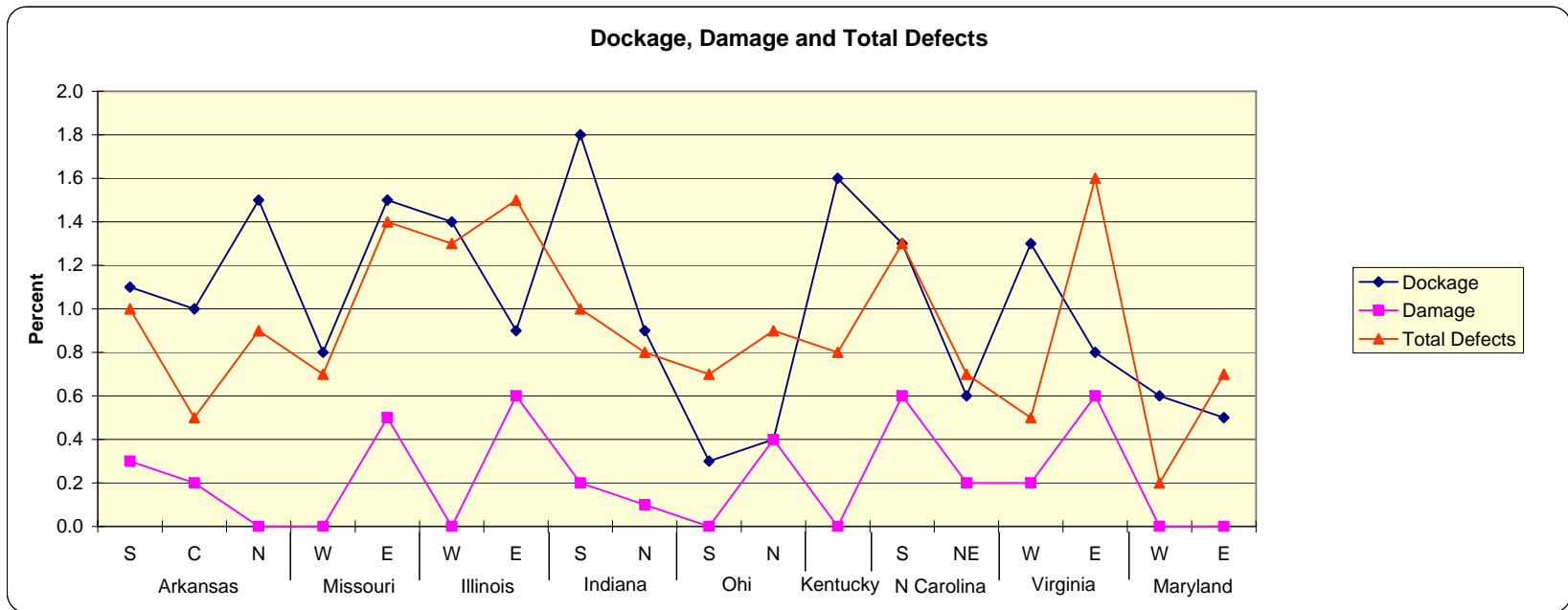
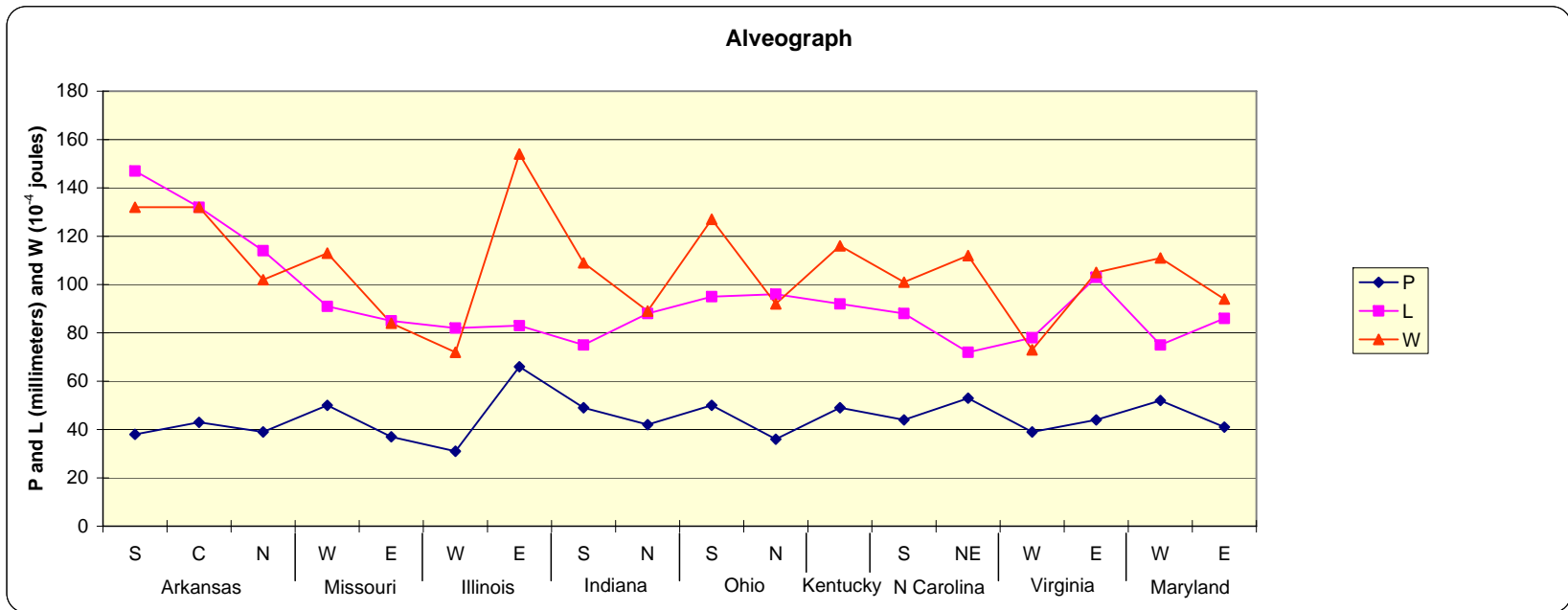
Comparisons of 2007 Results For Selected Quality Factors



Comparisons of 2007 Results For Selected Quality Factors

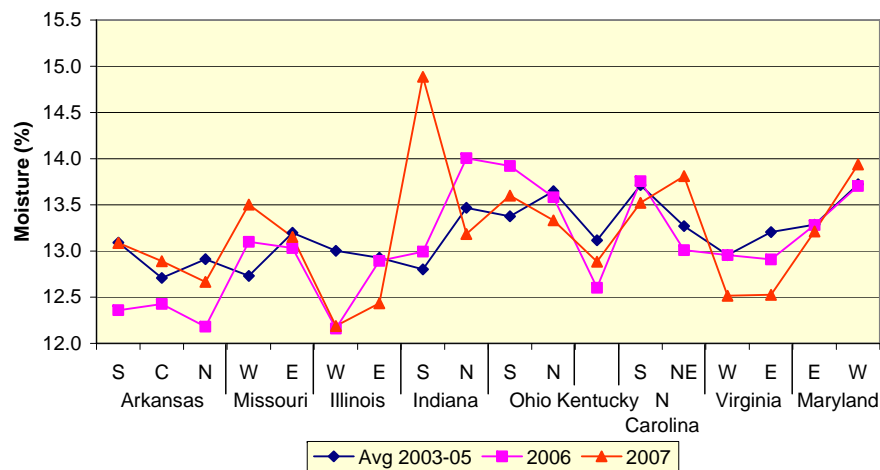


Comparisons of 2007 Results For Selected Quality Factors

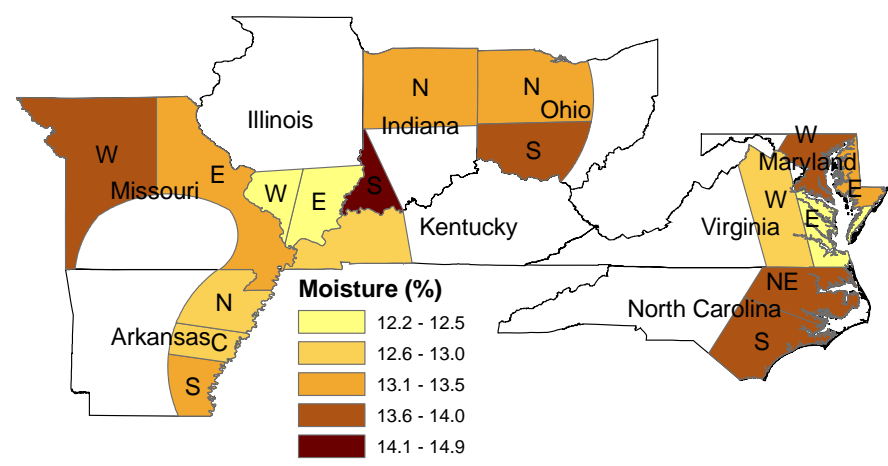
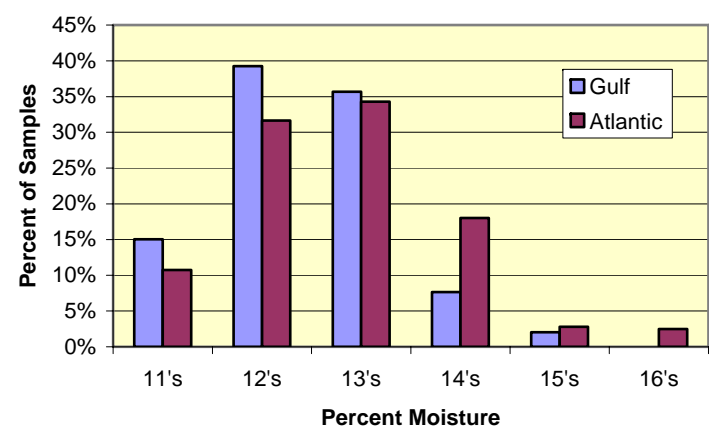


Distribution of 2007 Results and Comparisons with Previous Years For Selected Quality Factors

Moisture

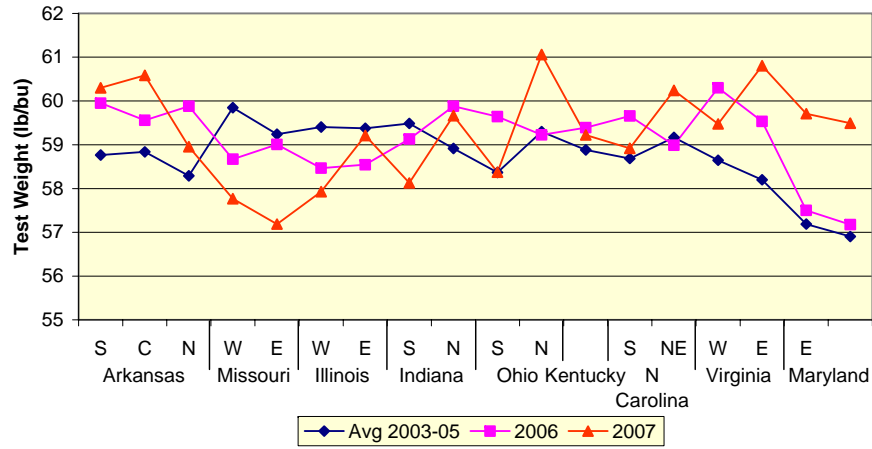


Moisture

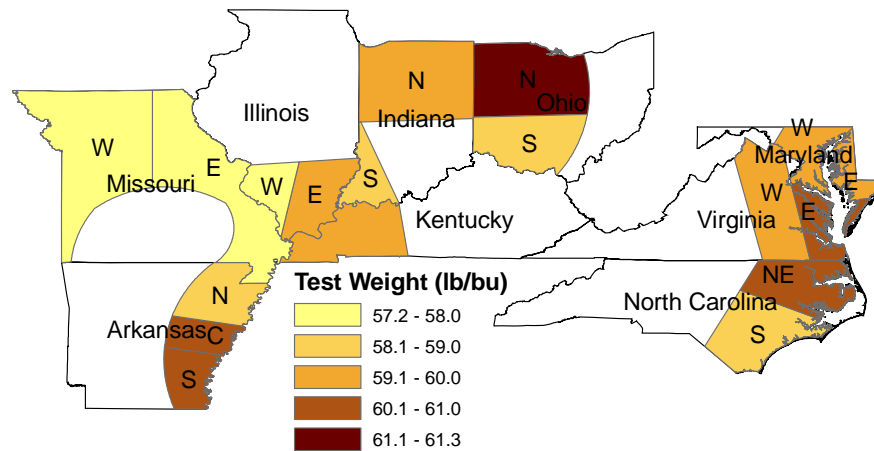
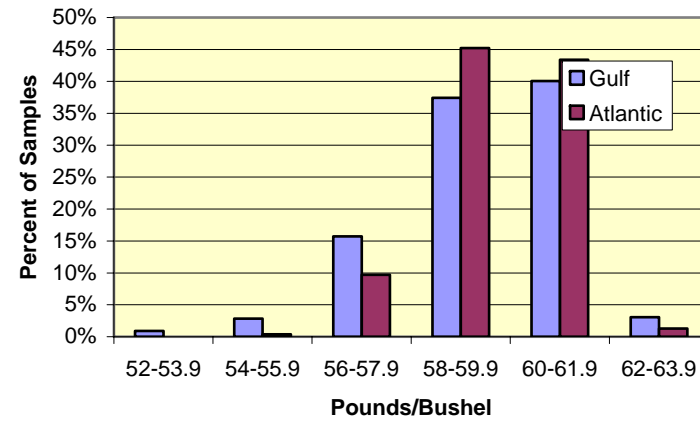


Distribution of 2007 Results and Comparisons with Previous Years For Selected Quality Factors

Test Weight

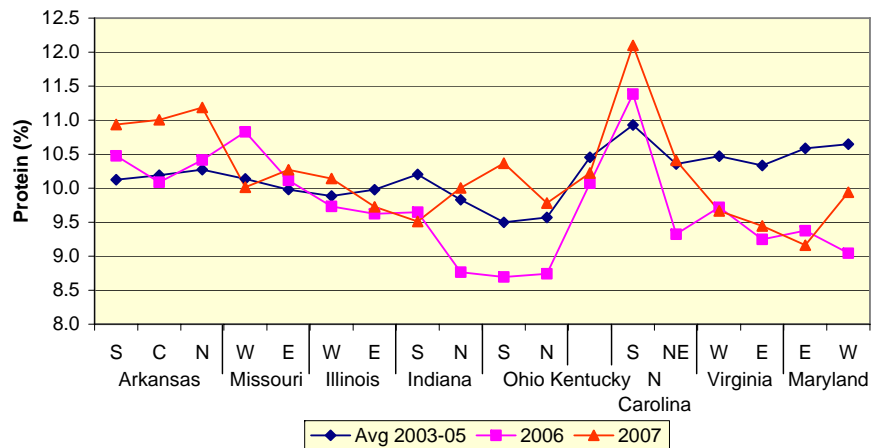


Test Weight

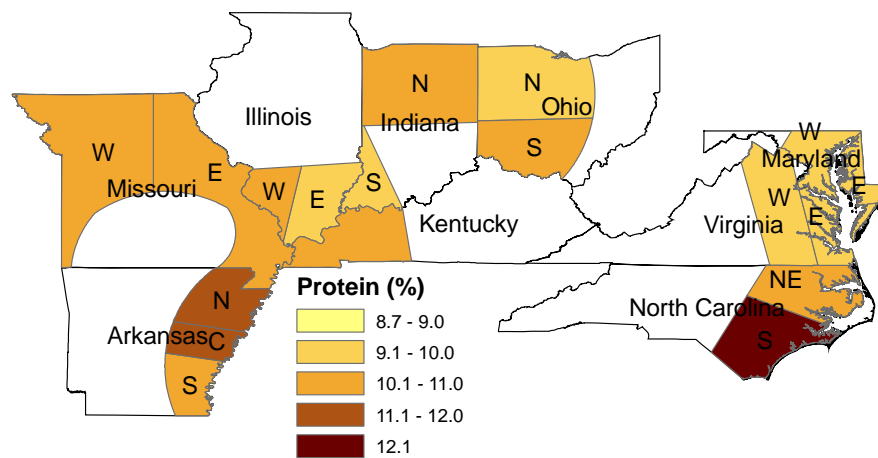
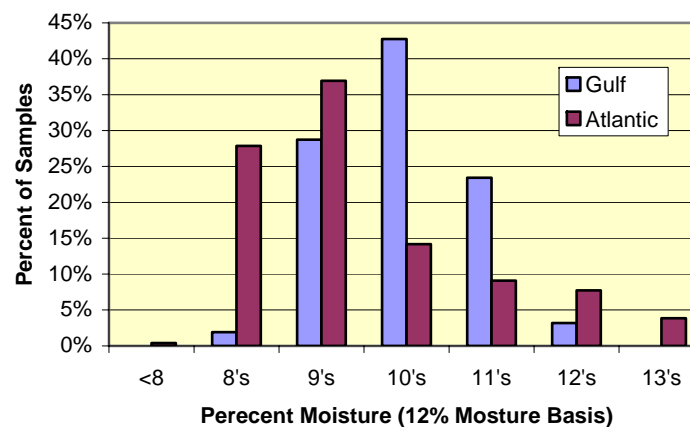


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Protein

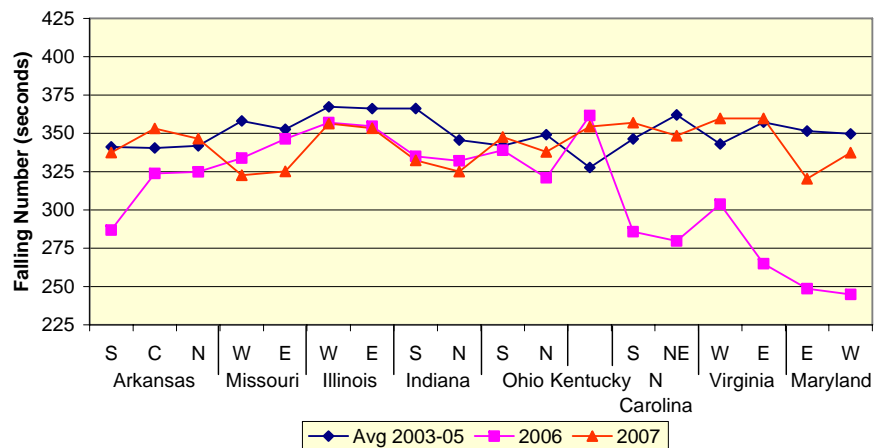


Protein

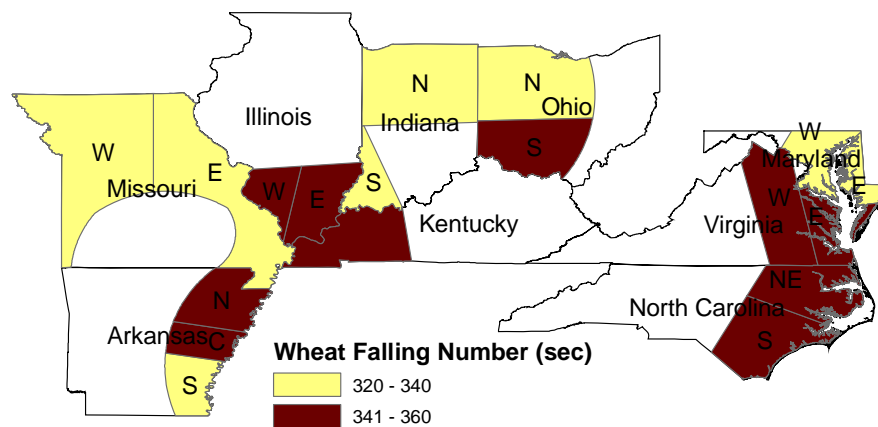
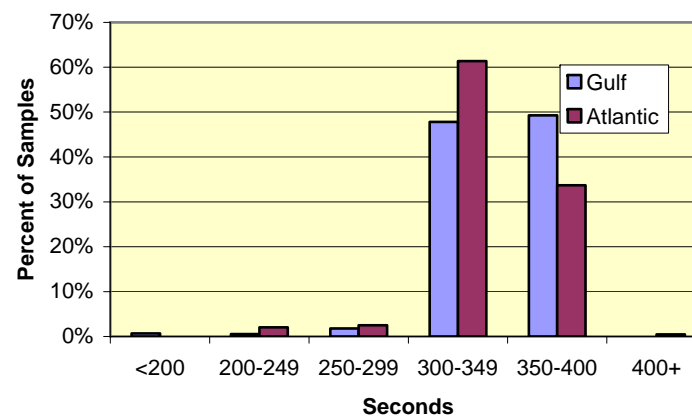


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Wheat Falling Number

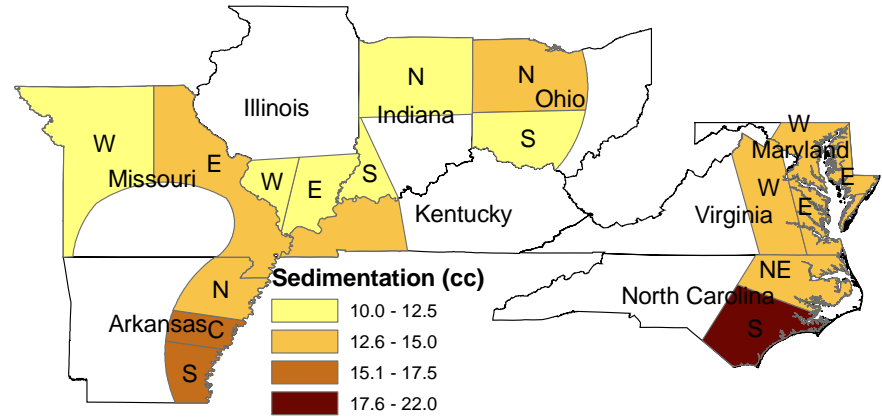
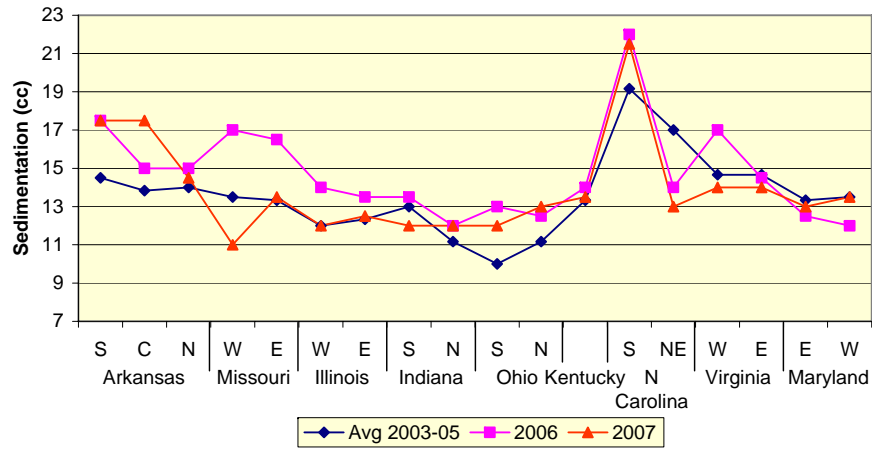


Falling Number

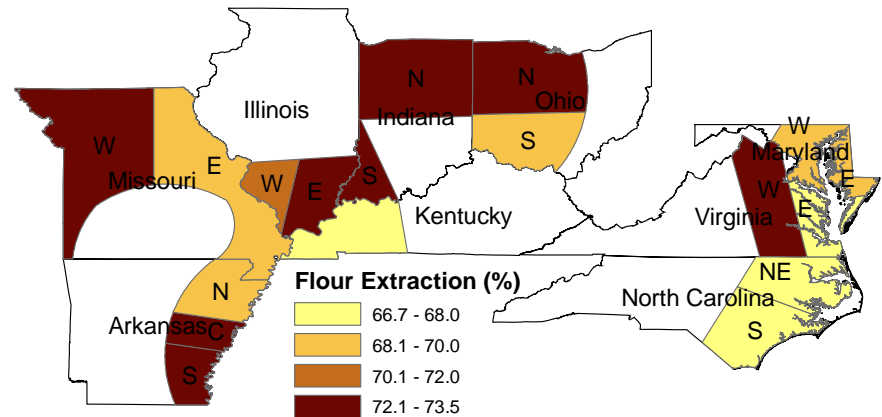
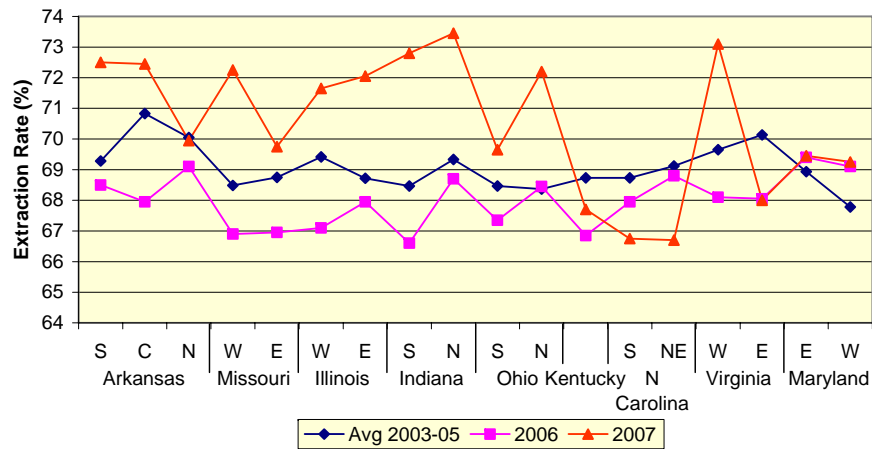


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Sedimentation

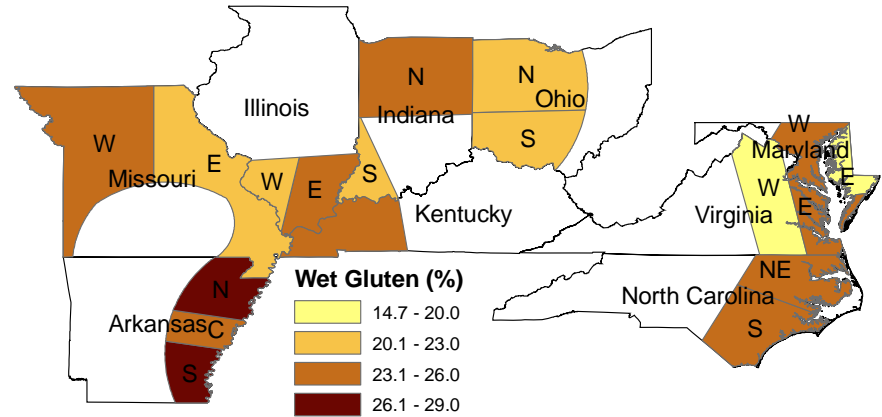
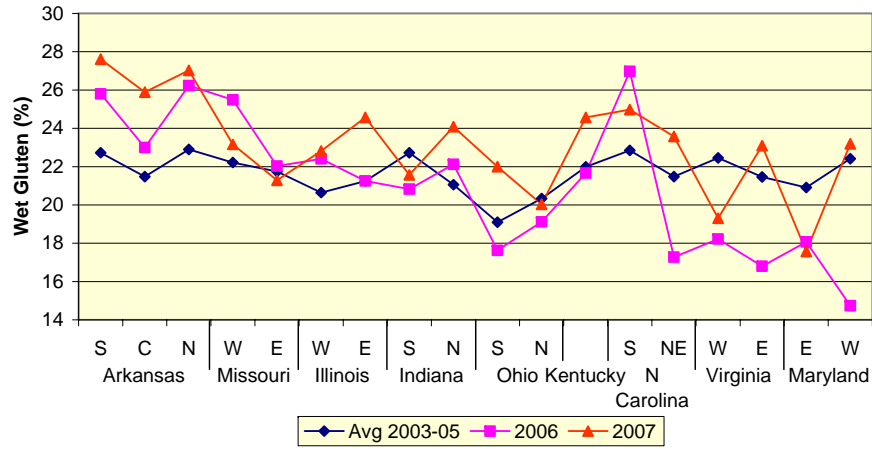


Flour Extraction Rate

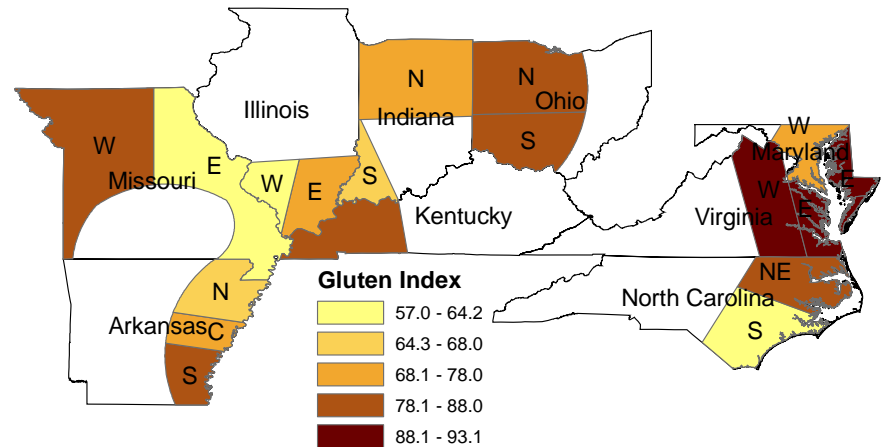
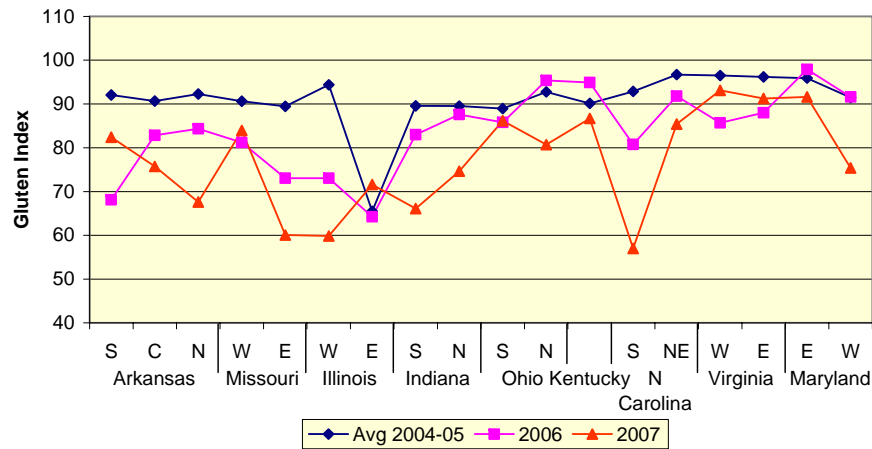


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Wet Gluten

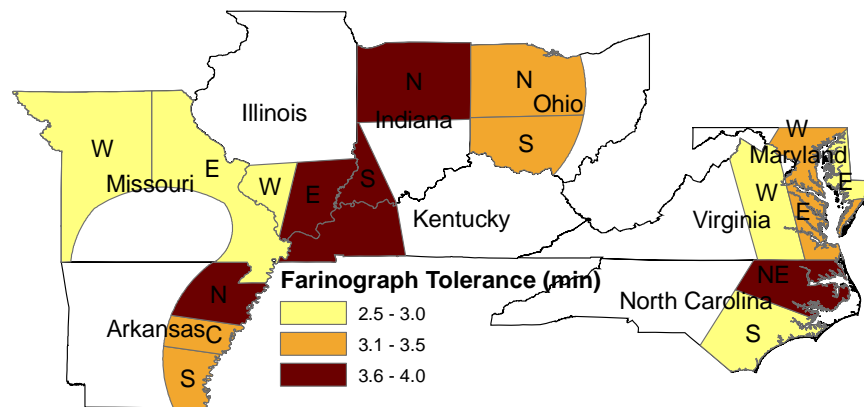
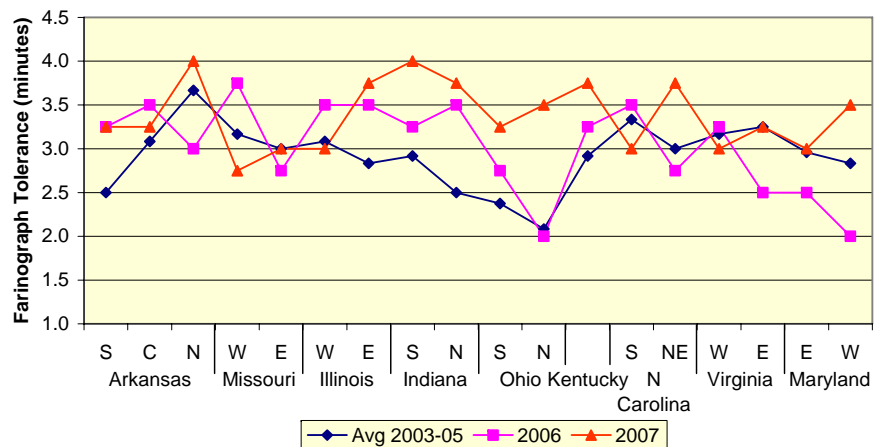


Gluten Index

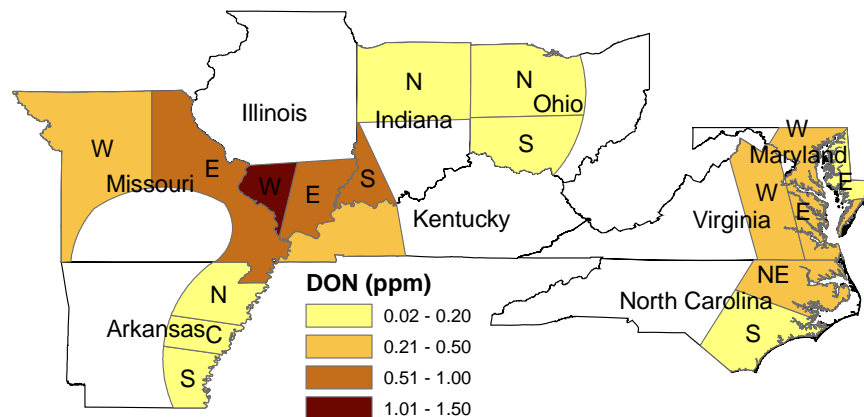
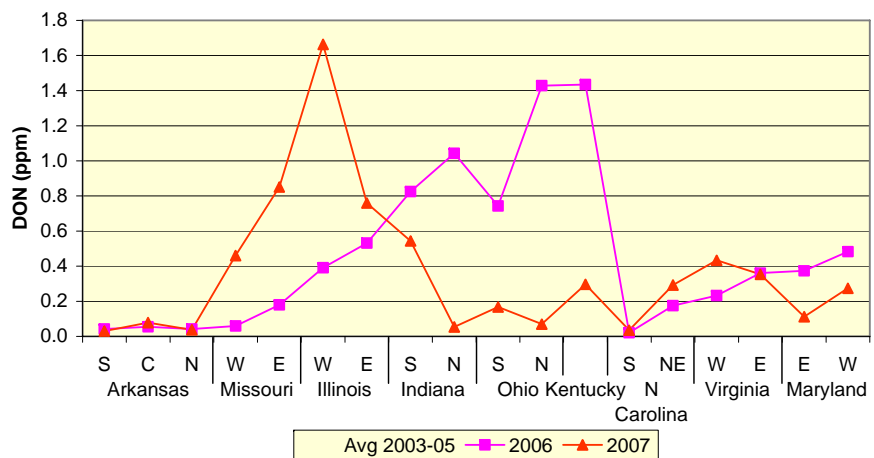


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Farinograph Tolerance

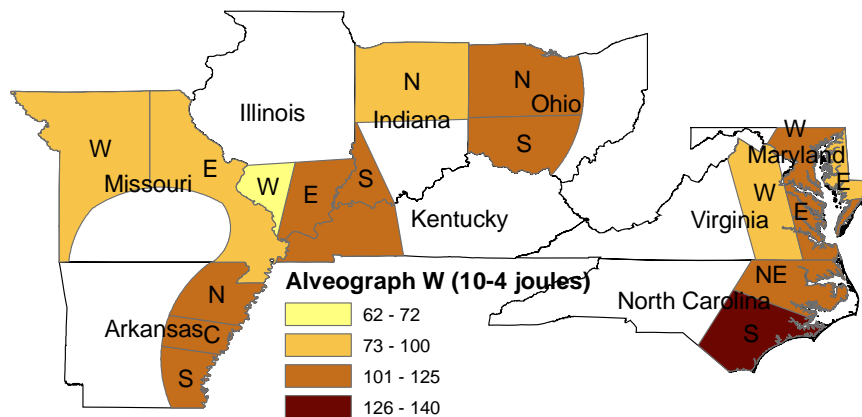
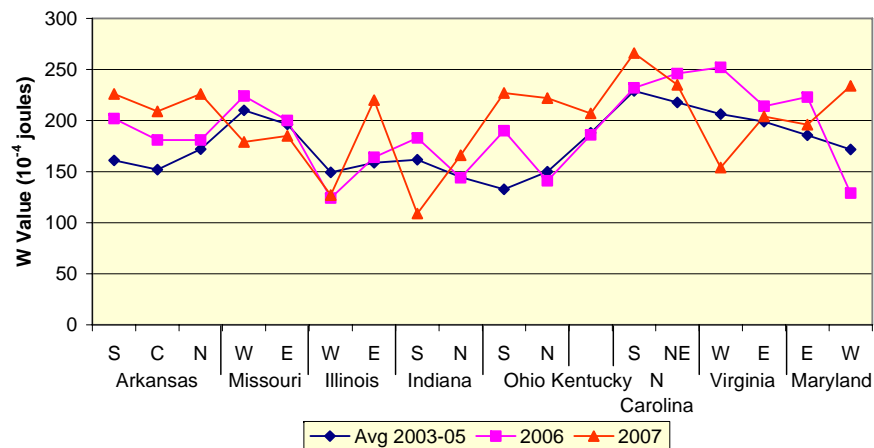


DON



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Alveograph W Value



Alveograph P/L

