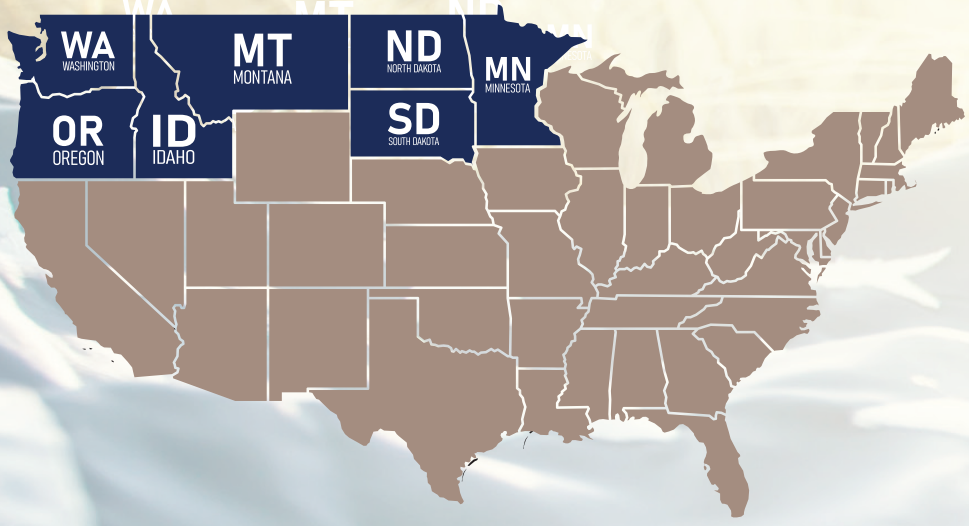
2025 U.S. HARD RED SPRING WHEAT

REGIONAL QUALITY REPORT

U.S.
HARD RED
SPRING
Wheat

MINNESOTA
MONTANA
NORTH DAKOTA
SOUTH DAKOTA
IDAHO
OREGON
WASHINGTON



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The Aristocrat of Wheat

Hard Red Spring, a specialty wheat grown primarily in the Northern Plains of the United States - stands out as the aristocrat of wheat when it comes to baking bread. The high protein content and superior gluten quality of hard red spring wheat make it ideal for use in some of the world's finest baked goods. Yeast breads, hard rolls, specialty products such as hearth breads, whole grain breads, bagels and pizza crusts look and taste their best when bake with top-quality spring wheat flour. Even frozen dough products are better with spring wheat because they can be stored longer than those made with lower protein wheats.

Flour mills in the United States and around the world also use hard red spring wheat extensively as a blending wheat to increase the gluten strength in a batch of flour. Adding hard red spring to lower protein wheat improves dough handling and mixing characteristics as well as water absorption. The resulting flour can be used to make an assortment of bread products, as well as Chinese-type noodles.

Overview

The 2025 U.S. hard red spring wheat crop is characterized by high grades, a high average protein level, and functional properties that show a crop with enhanced absorption levels and similar dough strength to a year ago. Production is 9% lower compared to 2024, primarily due to lower planted area. The national average yield was well above normal for a second consecutive year, due to excellent growing season moisture in central and eastern areas, offsetting lower yields across western areas which were impacted by early and mid-season drought conditions.

2025 PRODUCTION DATA

	2025	2024	2020-24 AVERAGE
MILLION BUSHELS			
Minnesota	76	81	72
Montana	57	62	73
North Dakota	277	310	258
South Dakota	33	31	29
ID/OR/WA	17	21	16
U.S. Total	458	503	449
MILLION METRIC TON			
Minnesota	2.07	2.2	2.0
Montana	1.55	1.66	2.0
North Dakota	7.54	8.44	7.0
South Dakota	0.90	0.84	0.8
ID/OR/WA	0.46	0.54	0.4
U.S. Total	12.5	13.7	12.2

Source: USDA 2025 Small Grains Summary

U.S. HARD RED SPRING *Wheat*

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The **Crop Averages** a No. 1 Northern Spring, similar to last year and the 5-year average. Ninety-seven percent of the survey samples graded a No. 1, which is exceptionally high. Crop average test weight is 61.8 lbs/bu (81.3 kg/hl), slightly higher than 2024 and the 5-yr average, with distributions showing nearly 84 percent of survey samples above 60 lbs/bu (78.9 kg/hl). A nice improvement in test weights was seen across western production areas, relative to 2024.

Average damaged kernel levels at 0.5 percent, are similar to last year, but slightly higher than the 5-year average. Shrunken and broken kernels levels are slightly lower than 2024. Crop average vitreous kernel levels are 60%, lower than 2024 and the 5-yr average, due to rain and high humidity levels during the harvest season. The highest vitreous kernel levels are in the western production areas, although vitreous kernel levels are lower than typical across a broad part of the growing region.

Protein levels average 14.2% (12% moisture basis), higher and more balanced across the region, relative to 2024, but slightly below the 5-yr average. Slightly more than ninety percent of the survey samples show protein higher than 13%, with nearly forty percent of the samples between 14-14.9 percent.

Thousand Kernel Weights (TKW) are appreciably higher in 2025, averaging 34.1 grams, up from 32.5 grams in 2024. The most notable improvements were made in western production areas where heat stress was less intensive than the 2024 growing season. Disease pressures from Fusarium headblight were more isolated in 2025, compared to 2024. The crop average DON is 0.3 ppm, down from 0.7 ppm. Crop average falling number values are similar to a year ago at 405 seconds, although untimely rains did impact values in isolated areas of the region. Still, more than ninety percent of the survey samples are higher than 350 seconds.

In 2025, a new Buhler Lab Mill was used, and that must be taken into consideration when making direct comparisons to 2024 values and 5-yr averages. Flour extractions on survey samples average 68.4%, slightly lower than 2024, while flour ash is slightly higher, at 0.53 percent. Starch damage is notably higher at 7 percent. Flour viscosity is 545 B.U., is similar to last year, reflective of a relatively wet harvest across a broad part of the region.

Physical Dough tests are revealing a crop with similar strength, but notably higher absorption compared to 2024, as measured by the Farinograph. The crop average stability on the Farinograph is 11.5 minutes, compared to 11.7 in 2024, but lower than the 5-yr average of 13.5 minutes. Farinograph absorption is 63.6%, one to two percentage points higher than recent years. Western areas of the region are showing slightly higher absorptions compared to eastern areas. The extensograph data is showing stronger dough properties, with dough that becomes more extensible the longer the rest, relative to last year. Alveograph values are showing stronger dough properties with a crop average P/L ratio of 0.73, and a W value of 415, compared to 386 in 2024.

Baking evaluations are showing slightly lower loaf volumes compared to last year but similar to the 5-year average. The crop averages 942 cubic centimeters, ranging from 885 to 1050 cubic centimeters across the region. Dough handling properties scored slightly lower than recent years, with similar crumb color and grain and texture scores, but slightly lower symmetry scores.

Buyers will find the 2025 U.S. hard red spring wheat crop to have high grades, high kernel protein levels with good balance across the region, and functional properties that are characteristic for the HRS class. Some variance does exist in isolated pockets due to untimely harvest rains, and the lower vitreous kernel levels across a broad portion of the crop may require adjustments in typical contract specifications for some buyers. Overall, buyers will find good value in the 2025 crop, and that it will meet the needs for blending as for use in high quality baked products, as well as use in high quality baked products.

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SEASONAL CONDITIONS

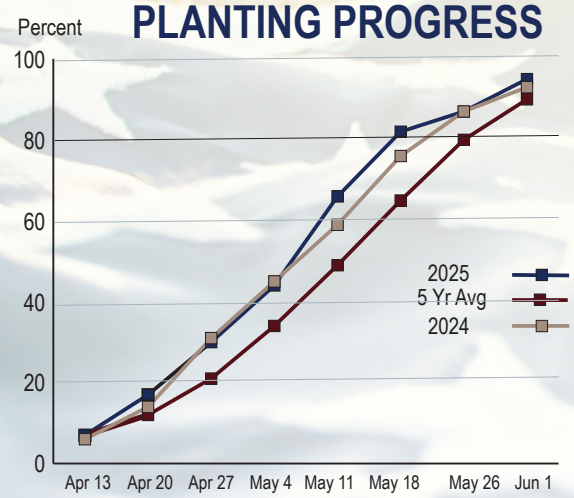
PLANTING of the spring wheat crop started in early April, ahead of average, due to limited snowfall and warmer spring temperatures. Most of the region had drier than normal soil conditions at the start of the season. Scattered precipitation fell throughout the planting period, and while it delayed planting in areas, it was appreciated as it helped replenish soil moisture levels. Planting in some eastern areas was delayed due to overly wet conditions.

The crop **EMERGED** under variable conditions. Extreme weather, ranging from hot, dry and windy to cold and wet with severe storms, caused variable crop conditions and staggered timing of emergence. As the growing season progressed, the weather patterns evened out and the crop progressed at a near average pace. In general, western areas remained drier than normal and most eastern regions had more plentiful moisture. Disease pressure was elevated in areas, but not widespread. Overall yield potential was good, with record yields in areas. Areas with extremely dry conditions had lower than average yields.

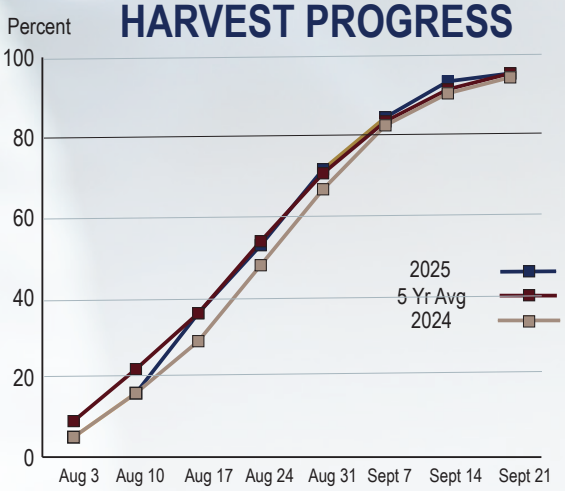
HARVEST began in late July on the earliest planted crop, slightly ahead of average. The first portion of harvest was slow and delayed due to wet conditions and higher than normal humidity that delayed maturity and dry down of the crop. Weather conditions improved the second half of the month and harvest continued at a good pace. Most of the harvest was complete by early September with the final portion of harvest delayed once again by wet conditions.

PRODUCTION of the spring wheat crop is down 9% from last year at 458 million bushels, due to a drop in planted acreage. The average yield was just slightly lower than last year's record, though Minnesota did set another record yield and yields in Montana were higher than expected.

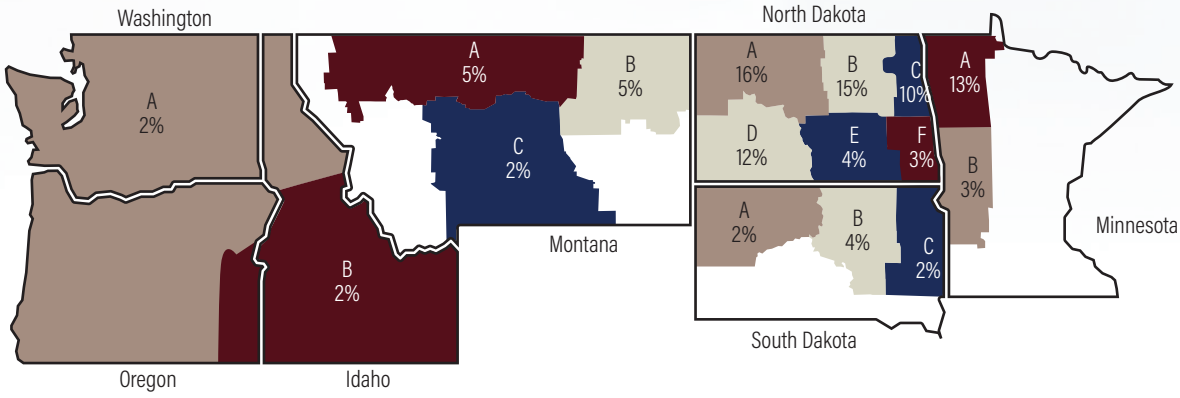
PLANTING PROGRESS



HARVEST PROGRESS



APPROXIMATE SHARE OF REGIONAL PRODUCTION



The Aristocrat of wheat

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WHEAT GRADES as defined by the Federal Grain Inspection Service (FGIS) of the USDA Grain Inspection, Packers and Stockyards Administration (GIPSA), reflect the general quality and condition of a representative sample. U.S. grades are based on test weight and include limits on damaged kernels, foreign material, shrunken and broken kernels, and wheat of contrasting classes. Each determination is made on the basis of the grain when free from dockage and shrunken and broken kernels.

SUBCLASS is as separate marketing factor based on the number of kernels that are dark, hard and vitreous. For hard red spring wheat, the subclasses are:

- ***Dark Northern Spring (DNS)*** – at least 75 percent or more dark, hard, vitreous kernels;
- ***Northern Spring (NS)*** – between 25 and 74 percent dark, hard, vitreous kernels;
- ***Red Spring (RS)*** – less than 25 percent dark, hard, vitreous kernels.

OTHER BASIC CRITERIA not included as grading factors but important in the U.S. wheat marketing system.

PROTEIN is probably the most important factor in determining the value of hard red spring wheat since it relates to many processing properties. In the U.S. market HRS prices are usually quoted for 14.0 percent protein (on a 12.0 percent moisture basis). Price premiums or discounts may be specified for halves, fifths and tenths of a percentage point above and below 14.0 percent.

MOISTURE content is an indicator of grain storability. Wheat with lower moisture content is generally more stable during storage and more profitable to a miller. U.S. HRS ranges from 12 to 13 percent.

DOCKAGE is any material easily removed from a wheat sample during cleaning using standard mechanical means. All U.S. grade and non-grade factors are determined only after dockage is removed.

FALLING NUMBER indicates the soundness of wheat or its alpha-amylase activity. Falling numbers above 300 seconds are most desired for baking products.

2025 PRODUCTION DATA

	U.S. GRADES				
GRADING FACTORS	**1**	**2**	**3**	**4**	**5**
HARD RED SPRING - MINIMUM TEST WEIGHTS					
Pounds per bushel	58.0	57.0	55.0	53.0	50.0
Kilograms per hectoliter	76.4	75.1	72.5	69.9	66.0
MAXIMUM PERCENT LIMITS OF:					
Damaged kernels					
Heat (part of total)	0.2	0.2	0.5	1.0	3.0
Total	2.0	4.0	7.0	10.0	15.0
Foreign material	0.4	0.7	1.3	3.0	5.0
Shrunken/broken kernels	3.0	5.0	8.0	12.0	20.0
Total	3.0	5.0	8.0	12.0	20.0
Wheat of other class[2]					
Contracting classes	1.0	2.0	3.0	10.0	20.0
Total[3]	3.0	5.0	10.0	10.0	10.0
Stones	0.1	0.1	0.1	0.1	0.1
MAXIMUM COUNT LIMITS OF:					
Other material					
Animal filth	1	1	1	1	1
Castor beans	1	1	1	1	1
Crotalaria seeds	2	2	2	2	2
Glass	0	0	0	0	0
Stones	3	3	3	3	3
Unknown foreign material	3	3	3	3	3
Total[4]	4	4	4	4	4
Insect-damaged kernels	31	31	31	31	31

U.S. sample grade is wheat that:

a. Does not meet the requirements for U.S. Nos. 1, 2, 3, 4 or 5; or
b. Has a musty, sour or commercially objectionable foreign odor (except smut or garlic odor); or
c. Is heating or of distinctly low quality.

1. Includes damaged kernels (total), foreign material and shrunken and broken kernels.
2. Unclassed wheat of any grade may contain not more than 10.0 percent of wheat of other classes.
3. Includes contrasting classes.
4. Includes any combination of animal filth, castor beans, crotalaria seeds, glass, stones or unknown foreign substance.

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2025 WHEAT GRADING DATA

STATE AND CROP REPORTING AREA	TEST WEIGHT LBS/BU	TEST WEIGHT KG/HL	DAMAGE %	KERNEL FACTORS SHRUNKEN/BROKEN KERNELS %	KERNEL FACTORS TOTAL DEFECTS %	KERNEL FACTORS U.S. GRADE SUBCLASS	KERNEL FACTORS VITREOUS KERNELS %
MINNESOTA							
Area A	62.1	81.7	0.3	0.3	0.6	1 NS	59
Area B	60.5	79.6	0.7	06	1.3	1 NS	59
State Avg. 2025	61.8	81.2	0.4	0.4	0.8	1 NS	59
State Avg. 2024	61.4	80.7	1.1	0.4	1.5	1 NS	45
MONTANA							
Area A	60.7	79.8	0.8	0.9	1.7	1 DNS	75
Area B	60.9	80.1	0.5	0.9	1.4	1 NS	71
Area C	61.5	80.9	0.3	1.1	1.4	1 DNS	75
State Avg. 2025	60.9	80.1	0.6	0.9	1.5	1 NS	73
State Avg. 2024	59.3	78.1	0.0	1.8	2.2	1 DNS	92
NORTH DAKOTA							
Area A	62.8	82.6	0.8	0.4	1.2	1 NS	60
Area B	62.4	82.0	0.5	0.3	0.8	1 NS	58
Area C	61.8	81.3	0.2	0.3	0.5	1 NS	62
Area D	61.6	81.0	0.3	0.9	1.2	1 NS	48
Area E	61.7	81.1	0.2	0.5	0.7	1 NS	56
Area F	60.5	79.6	0.8	0.2	1.0	1 NS	55
State Avg. 2025	62.1	81.7	0.5	0.5	1.0	1 NS	57
State Avg. 2024	61.6	81.0	0.7	0.5	1.2	1 NS	65
SOUTH DAKOTA							
Area A	59.8	78.7	0.7	1.0	1.7	1 NS	33
Area B	60.9	80.1	0.3	0.4	0.7	1 NS	43
Area C	59.3	78.0	1.4	0.5	1.9	1 NS	48
State Avg. 2025	60.2	79.2	0.7	0.6	1.3	1 NS	42
State Avg. 2024	61.1	80.4	0.6	0.7	1.4	1 NS	62
IDAHO • OREGON • WASHINGTON							
Area A	62.6	82.3	0.0	0.5	0.5	1 DNS	93
Area B	63.0	82.8	0.0	0.2	0.2	1 DNS	96
State Avg. 2025	62.8	82.5	0.0	0.4	0.4	1 DNS	94
State Avg. 2024	62.3	81.9	0.0	0.6	0.6	1 DNS	90
REGION AVERAGE							
Avg. 2025	61.8	81.3	0.5	0.5	1.0	1 NS	60
Avg. 2024	61.3	80.6	0.6	0.7	1.4	1 NS	66
Five-Year Avg	61.6	81.0	0.2	0.7	0.9	1 NS	70

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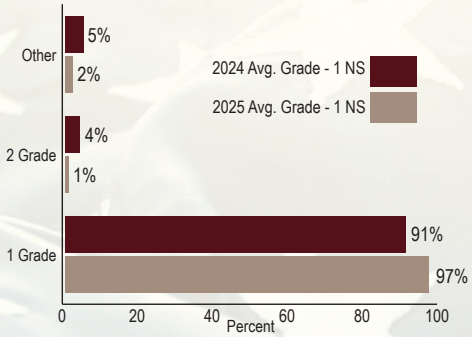
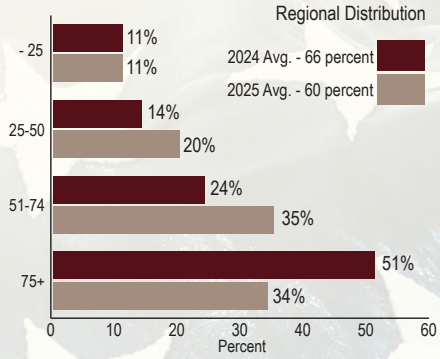
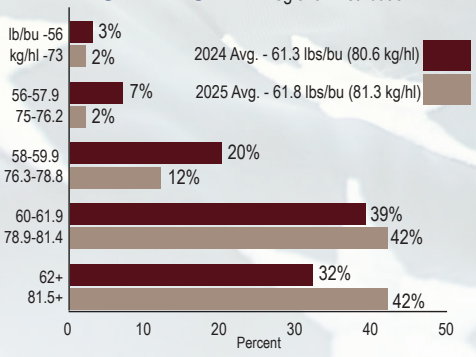
GRADE – Regional Distribution



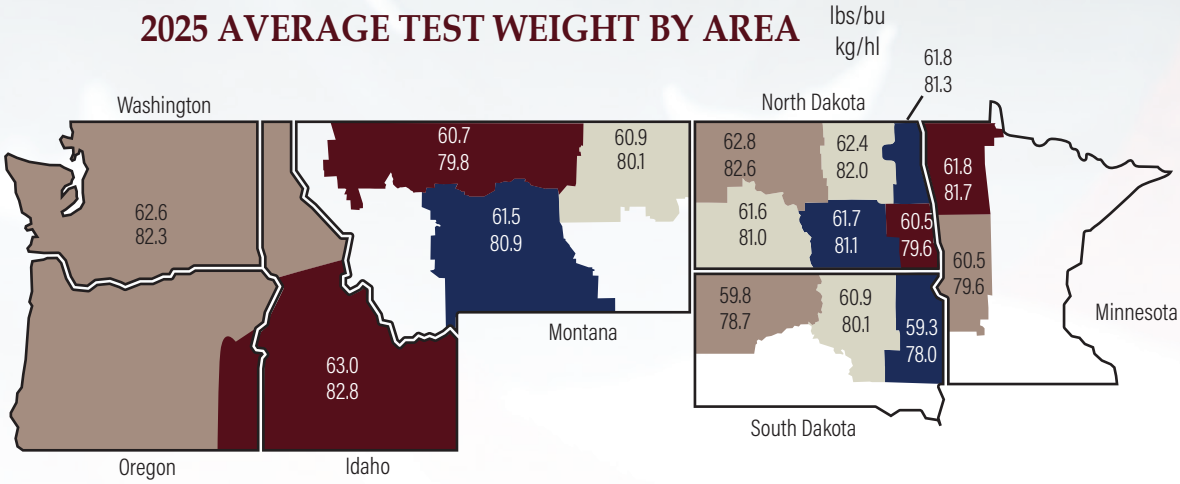
VITREOUS KERNEL



TEST WEIGHT – Regional Distribution



2025 AVERAGE TEST WEIGHT BY AREA



2025 OTHER KERNEL QUALITY DATA

STATE AND CROP REPORTING AREA	DOCKAGE %	MOISTURE %	1000 KERNEL WEIGHT G	KERNEL DIST. MED/LGE %	PROTEIN 12%/0% MOISTURE BASIS %	DON (PPM)	WHEAT ASH%	FALLING NUMBER (SEC)	ZELENY SED (CC)
MINNESOTA									
Area A	0.4	12.9	36.0	35/64	14.0/15.9	0.3	1.45	414	65
Area B	0.4	12.8	29.9	54/43	13.5/15.3	0.7	1.58	399	55
State Avg. 2025	0.4	12.9	34.8	39/60	13.9/15.8	0.4	1.48	411	63
State Avg. 2024	0.4	13.0	35.2	33/66	13.4/15.2	0.9	1.52	336	64
MONTANA									
Area A	0.7	11.0	34.8	52/46	14.8/16.8	0.0	1.48	381	69
Area B	1.9	11.2	32.9	56/42	15.2/17.3	0.0	1.51	398	70
Area C	1.0	10.2	33.7	56/41	14.1/16.0	0.2	1.52	394	65
State Avg. 2025	1.3	11.0	33.8	54/44	14.9/16.9	0.1	1.50	390	69
State Avg. 2024	0.9	11.0	27.2	72/21	15.0/17.1	0.2	1.56	441	67
NORTH DAKOTA									
Area A	0.5	12.5	35.0	33/66	14.5/16.5	0.1	1.47	409	70
Area B	0.4	12.5	36.1	36/63	14.2/16.1	0.2	1.47	411	66
Area C	0.4	12.8	35.3	36/63	14.2/16.1	0.2	1.52	363	65
Area D	0.7	12.1	31.1	51/46	14.0/15.9	0.4	1.56	447	66
Area E	0.4	12.7	32.4	43/55	14.1/16.0	0.5	1.59	404	63
Area F	0.4	13.3	34.6	40/59	13.9/15.8	0.5	1.61	407	57
State Avg. 2025	0.5	12.5	34.3	39/60	14.2/16.2	0.2	1.51	409	66
State Avg. 2024	0.7	12.8	32.7	45/54	13.8/15.7	0.7	1.58	404	65
SOUTH DAKOTA									
Area A	1.4	12.6	30.0	61/37	13.8/15.7	0.4	1.61	394	64
Area B	0.5	12.6	30.5	54/44	14.4/16.4	0.6	1.57	431	55
Area C	0.6	12.8	30.1	52/47	13.9/15.8	0.9	1.70	346	41
State Avg. 2025	0.7	12.7	30.3	55/43	14.1/16.1	0.6	1.61	401	54
State Avg. 2024	0.6	12.1	32.4	44/53	14.3/16.2	1.0	1.57	430	61
IDAHO • OREGON • WASHINGTON									
Area A	0.3	9.6	37.3	43/56	13.6/15.5	0.0	1.42	366	65
Area B	0.3	9.4	32.5	49/50	14.2/16.1	0.2	1.59	389	61
State Avg. 2025	0.3	9.5	35.4	45/54	13.8/15.7	0.1	1.49	375	63
State Avg. 2024	0.4	9.6	33.9	46/51	14.3/16.2	0.2	1.58	443	68
REGION AVERAGE									
Avg. 2025	0.6	12.3	34.1	42/56	14.2/16.2	0.3	1.51	405	65
Avg. 2024	0.6	12.5	32.5	46/52	13.9/15.8	0.7	1.57	401	65
Five-Year Avg	0.6	12.1	32.1	51/47	14.4/16.3	0.2	1.54	393	65

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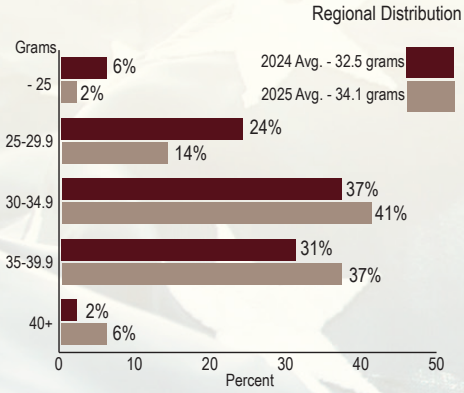
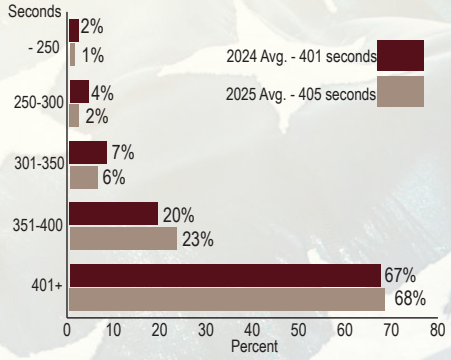
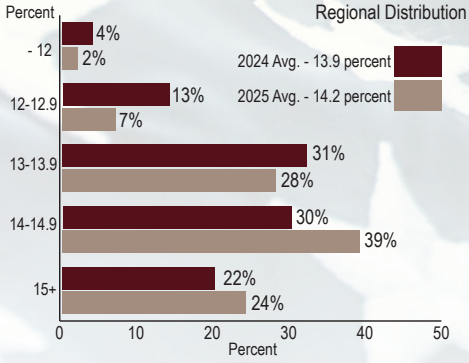
1000 KERNEL WEIGHT



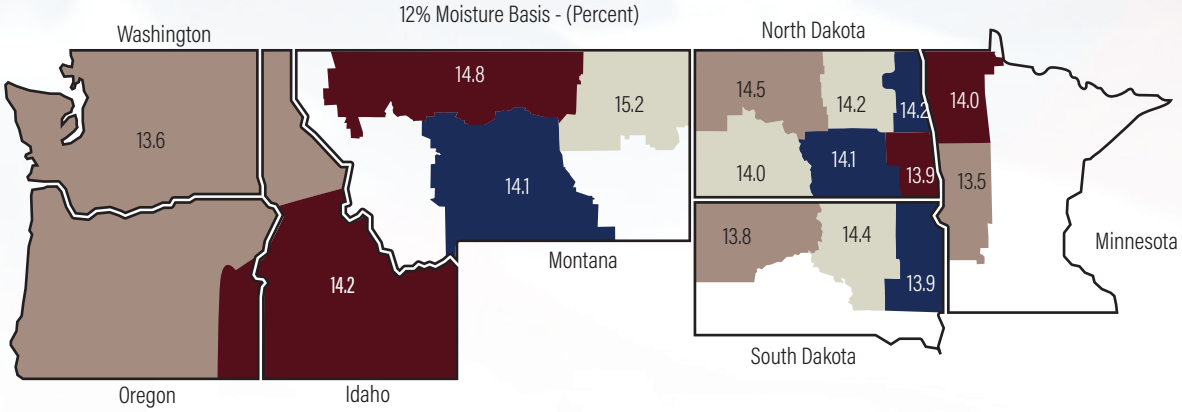
FALLING NUMBER - Regional Distribution



PROTEIN - 12% MOISTURE



2025 AVERAGE WHEAT PROTEIN BY AREA



2025 FLOUR QUALITY DATA*

STATE AND CROP REPORTING AREA	FLOUR EXTRACTION %	FLOUR ASH %	FLOUR PROTEIN (14% MOISTURE) %	STARCH DAMAGE %	SRC: GPI	WATER 50% SUCROSE	5% LACTIC ACID/5% NA2CO2%	WET GLUTEN %	GLUTEN INDEX	FALLING NUMBER	AMYLOGRAPH VISCOSITY 65 G FL B.U.
MINNESOTA											
Area A	69.2	0.56	13.3	6.8	0.67	72/117	144/97	34.8	97	406	511
Area B	68.1	0.60	12.3	7.0	0.63	69/117	135/96	32.0	95	412	498
State Avg. 2025	69.0	0.57	13.1	6.8	0.66	71/117	142/97	34.2	97	407	508
State Avg. 2024	69.4	0.46	12.1	6.5	0.75	66/105	145/87	31.8	91	357	358
MONTANA											
Area A	67.2	0.52	13.6	7.0	0.75	76/130	178/109	37.0	93	391	566
Area B	67.0	0.51	14.3	6.4	0.76	73/124	171/102	39.0	89	417	533
Area C	67.9	0.54	13.2	7.5	0.64	74/125	151/110	34.8	92	417	619
State Avg. 2025	67.2	0.52	13.8	6.8	0.74	74/127	171/106	37.5	91	406	561
State Avg. 2024	68.4	0.51	13.7	6.5	0.73	71/118	157/98	36.0	85	424	761
NORTH DAKOTA											
Area A	67.9	0.48	13.4	7.0	0.69	73/119	153/101	35.0	95	402	569
Area B	68.7	0.52	13.1	7.2	0.68	72/116	149/101	33.3	97	417	548
Area C	69.0	0.51	13.2	7.2	0.67	72/118	147/100	33.7	97	396	493
Area D	68.7	0.53	13.0	6.9	0.67	71/120	149/102	32.9	96	397	574
Area E	68.7	0.60	13.1	7.3	0.65	73/119	143/102	33.4	97	407	644
Area F	69.4	0.56	12.8	7.2	0.63	71/116	136/98	31.9	97	397	454
State Avg. 2025	68.6	0.52	13.2	7.1	0.67	72/118	149/101	33.7	96	404	552
State Avg. 2024	69.3	0.51	12.5	6.8	0.73	69/109	149/94	32.7	89	390	566
SOUTH DAKOTA											
Area A	69.3	0.57	12.9	6.2	0.67	68/114	139/93	32.8	94	394	561
Area B	68.8	0.61	13.0	6.7	0.67	69/113	137/93	32.6	94	442	633
Area C	67.4	0.68	12.6	8.8	0.56	76/118	123/103	31.4	93	381	310
State Avg. 2025	68.6	0.62	12.9	7.1	0.64	71/115	134/96	32.4	94	415	534
State Avg. 2024	67.8	0.51	12.7	6.6	0.71	66/108	140/89	34.5	76	412	568
IDAHO • OREGON • WASHINGTON											
Area A	67.4	0.53	13.0	7.1	0.69	75/126	162/109	33.7	93	421	431
Area B	66.6	0.60	13.7	7.2	0.61	74/127	143/107	37.3	79	451	720
State Avg. 2025	67.1	0.56	13.3	7.1	0.66	75/126	154/108	35.1	87	433	547
State Avg. 2024	65.8	0.51	13.2	6.8	0.70	71/121	154/99	35.1	79	459	767
REGION AVERAGE											
Avg. 2025	68.4	0.53	13.2	7.0	0.68	72/119	149/101	34.2	95	407	545
Avg. 2024	69.0	0.50	12.6	6.7	0.73	69/110	149/93	33.1	88	393	564
Five-Year Avg	68.2	0.50	13.2	6.3	0.69	71/117	148/99	34.0	92	398	650

*In 2025, a new Buhler lab mill was used. It is the same size and model as previous, but direct comparisons of flour data to 2024 and five-year averages needs to be taken into consideration.

Terms Defined

FLOUR is evaluated for several factors to determine overall milling efficiency grade, soundness and functional properties.

EXTRACTION, or the proportion of the wheat kernel that can be milled into flour, is important to mill profitability. For purposes of this survey, test milling was conducted with a Buhler Laboratory mill. Results are suitable for comparison between crop years, however yields are lower than those obtained in commercial mills.

Another measure of milling efficiency and of flour grade is the ash content, or mineral residue, remaining after incineration of a sample.

STARCH DAMAGE measures physical damage to a proportion of the starch granules of flour. The level directly affects water absorption and dough mixing properties.

WET GLUTEN provides a quantitative measure of the gluten forming proteins in the flour that are primarily responsible for its dough mixing and baking properties.

FALLING NUMBER measures enzyme activity in flour. A fast time indicates high activity, revealing too much sugar and too little starch. Since starch provides bread's supporting structure, too much activity results in sticky dough and poor texture in finished products.

U.S. HARD RED SPRING *Wheat*

Minnesota
Montana
North Dakota
South Dakota
Idaho
Oregon
Washington

- Physical characteristics of dough are evaluated to reveal useful information about variations in flour types, processing requirements and expected end-product quality.
- A farinograph traces a curve during the dough mixing process to record variations in gluten development and the breakdown of gluten proteins over time. Water absorption indicates the amount of water that can be added to the flour until the dough reaches a definite consistency. Peak time indicates the number of minutes required to achieve this level of dough consistency and mixing tolerance indicates the stability of the dough. Both peak time and stability are related to dough strength.

2025 FLOUR QUALITY DATA

STATE AND CROP REPORTING AREA	ABSORPTION %	PEAK TIME MIN	STABILITY MIN	MTI B.U.	QUALITY NUMBER MM
MINNESOTA					
Area A	62.7	8.0	13.1	26	151
Area B	61.9	5.6	9.7	25	119
State Avg. 2025	62.5	7.5	12.4	26	145
State Avg. 2024	60.0	6.0	11.3	27	133
MONTANA					
Area A	65.4	7.9	12.6	24	152
Area B	65.4	6.7	10.7	21	145
Area C	65.3	7.5	8.7	32	128
State Avg. 2025	65.4	7.3	11.2	24	145
State Avg. 2024	62.7	8.0	12.4	23	162
NORTH DAKOTA					
Area A	64.2	7.6	12.1	24	148
Area B	63.5	7.4	10.9	25	140
Area C	63.8	7.6	12.1	26	145
Area D	63.2	7.3	12.1	24	145
Area E	64.0	7.5	10.4	30	134
Area F	61.7	6.6	11.0	26	131
State Avg. 2025	63.6	7.4	11.6	25	143
State Avg. 2024	61.6	7.1	11.5	26	139
SOUTH DAKOTA					
Area A	61.7	7.3	11.6	21	143
Area B	61.8	8.1	11.0	26	139
Area C	63.2	5.9	7.6	46	99
State Avg. 2025	62.1	7.4	10.3	30	130
State Avg. 2024	62.3	7.5	11.7	23	151
IDAHO • OREGON • WASHINGTON					
Area A	63.1	7.8	11.5	22	146
Area B	65.8	7.2	7.4	31	126
State Avg. 2025	64.2	7.6	9.9	26	138
State Avg. 2024	64.5	8.8	13.3	18	196
REGION AVERAGE					
Avg. 2025	63.6	7.4	11.5	25	142
Avg. 2024	61.6	7.1	11.7	25	144
Five-Year Avg	62.4	7.7	13.5	22	168

2025 PHYSICAL DOUGH QUALITY

STATE AND CROP REPORTING AREA	EXTENSIBILITY 45 MIN CM	RESISTANCE 45 MIN B.U.	AREA SQ CM	EXTENSIBILITY 135 MIN CM	RESISTANCE 135 MIN B.U.	AREA SQ CM	P MM	L MM	P/L RATIO	W JOULES X 10^4
MINNESOTA										
Area A	16.7	638	133	16.1	1004	197	94	131	0.72	420
Area B	15.3	552	106	16.0	739	148	83	128	0.65	331
State Avg. 2025	16.4	621	128	16.1	951	187	92	130	0.70	402
State Avg. 2024	18.3	534	118	15.3	890	161	81	129	0.63	375
MONTANA										
Area A	17.1	571	127	13.0	1017	161	109	135	0.81	475
Area B	19.0	539	131	15.1	766	145	96	142	0.68	432
Area C	17.3	476	105	15.1	1041	191	100	124	0.81	385
State Avg. 2025	17.9	542	125	14.2	915	159	102	136	0.75	443
State Avg. 2024	16.6	555	116	15.4	953	175	90	142	0.63	429
NORTH DAKOTA										
Area A	16.5	612	123	16.4	901	183	97	139	0.70	454
Area B	17.0	557	122	16.5	893	180	95	127	0.75	410
Area C	17.0	582	123	15.6	816	157	101	121	0.83	421
Area D	18.5	654	151	17.0	813	171	96	133	0.72	431
Area E	17.0	514	110	18.5	793	181	96	126	0.76	408
Area F	17.2	561	122	17.3	813	165	83	129	0.64	362
State Avg. 2025	17.2	593	127	16.6	856	175	96	130	0.74	426
State Avg. 2024	18.0	509	115	15.3	813	152	86	130	0.66	381
SOUTH DAKOTA										
Area A	17.6	548	122	18.3	746	169	83	145	0.57	372
Area B	16.5	505	107	15.1	710	131	88	118	0.75	347
Area C	17.2	425	92	17.6	653	146	88	115	0.77	313
State Avg. 2025	17.0	496	107	16.5	705	144	87	124	0.70	345
State Avg. 2024	17.6	433	93	14.7	699	123	86	124	0.69	359
IDAHO • OREGON • WASHINGTON										
Area A	16.1	546	112	14.8	1113	188	92	130	0.71	403
Area B	17.8	323	77	16.4	814	157	88	134	0.66	320
State Avg. 2025	16.8	457	98	15.4	993	176	90	132	0.69	370
State Avg. 2024	18.3	426	99	16.6	818	169	99	127	0.78	414
REGION AVERAGE										
Avg. 2025	17.1	578	124	16.2	872	172	95	131	0.73	415
Avg. 2024	17.8	511	114	15.3	835	155	86	131	0.66	386
Five-Year Avg	16.8	556	118	14.0	929	161	89	131	0.68	396

U.S. HARD RED SPRING *Wheat*

Minnesota

Montana

North Dakota

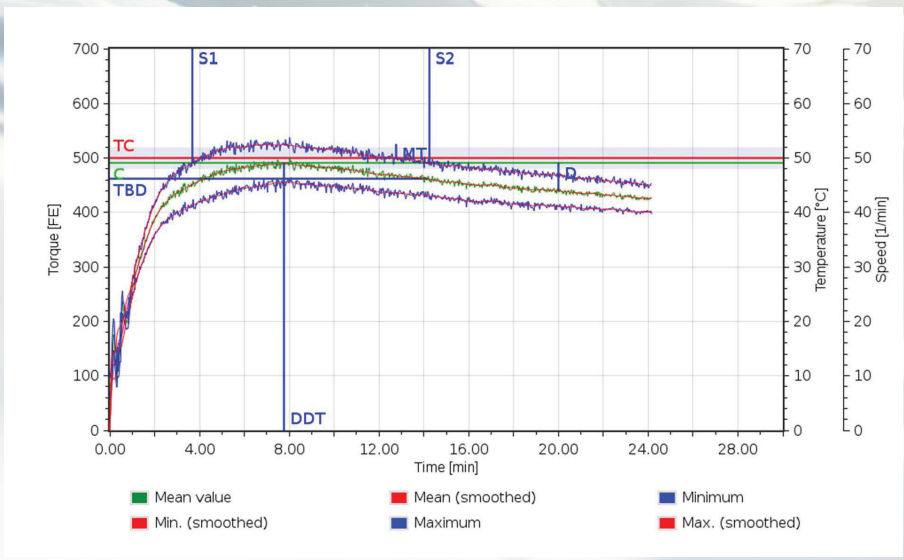
South Dakota

Idaho

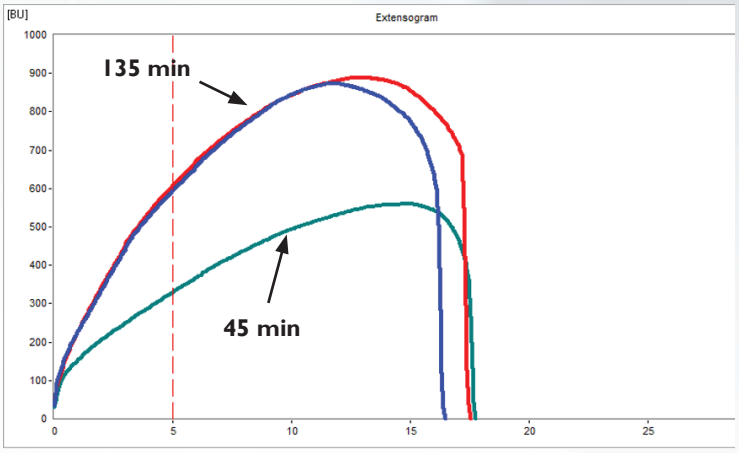
Oregon

Washington

2025 AVERAGE FARINOGRAM



2025 AVERAGE EXTENSIGRAM



The extensigraph measures dough strength by stretching a piece of dough on a hook until it breaks. The apparatus traces a curve that measures extensibility, resistance to extension and the area beneath the curve, or energy value.

2025 BAKING DATA

STATE AND CROP REPORTING AREA	BAKING ABSORPTION %	*DOUGH HANDLING PROPERTIES	LOAF VOLUME CC	GRAIN AND TEXTURE	CRUMB COLOR	CRUST COLOR	SYMMETRY
MINNESOTA							
Area A	64.9	10.0	900	7.0	7.5	10.0	7.0
Area B	61.8	9.0	955	8.0	7.0	10.0	8.0
State Avg. 2025	64.3	9.8	911	7.2	7.4	10.0	7.2
State Avg. 2024	62.8	8.9	942	7.1	7.1	9.9	8.0
MONTANA							
Area A	68.1	8.0	1025	8.0	8.5	10.0	9.0
Area B	65.6	9.0	1045	7.5	8.0	9.0	8.0
Area C	66.7	7.0	965	8.0	7.5	10.0	8.0
State Avg. 2025	66.8	8.3	1024	7.8	8.1	9.6	8.4
State Avg. 2024	65.7	8.9	1035	7.5	8.0	9.9	9.1
NORTH DAKOTA							
Area A	65.4	8.0	995	7.5	7.5	10.0	9.0
Area B	64.0	8.0	885	7.5	7.5	10.0	7.0
Area C	64.0	9.0	930	8.0	7.5	10.0	7.0
Area D	64.1	9.0	915	7.5	7.0	9.0	8.0
Area E	64.5	8.0	920	8.0	7.5	10.0	7.0
Area F	64.2	8.0	950	7.5	7.5	10.0	8.0
State Avg. 2025	64.4	8.4	933	7.6	7.4	9.8	7.8
State Avg. 2024	64.3	9.0	946	7.8	7.8	10.0	8.7
SOUTH DAKOTA							
Area A	62.9	8.0	935	7.5	8.0	10.0	8.0
Area B	62.7	7.0	910	8.0	8.0	9.0	7.0
Area C	65.0	8.0	960	7.5	7.5	10.0	9.0
State Avg. 2025	63.3	7.5	929	7.8	7.9	9.5	7.8
State Avg. 2024	64.2	8.5	955	7.8	7.9	9.3	7.3
IDAHO • OREGON • WASHINGTON							
Area A	66.4	8.0	940	7.5	8.0	10.0	8.0
Area B	67.2	6.0	1050	8.5	8.5	10.0	10.0
State Avg. 2025	66.7	7.2	984	7.9	8.2	10.0	8.8
State Avg. 2024	66.5	9.6	1024	8.3	8.3	10.0	9.4
REGION AVERAGE							
Avg. 2025	64.7	8.5	942	7.6	7.6	9.8	7.8
Avg. 2024	64.3	9.0	960	7.7	7.7	9.9	8.5
Five-Year Avg	66.8	8.8	951	7.8	7.9	9.9	8.4

U.S. HARD RED SPRING *Wheat*

Minnesota
Montana
North Dakota
South Dakota
Idaho
Oregon
Washington

2025 RECENT QUALITY TRENDS

CROP YEAR	2025	2024	2023	2022	2021	2020	FIVE-YEAR AVERAGE
WHEAT GRADING							
Test Weight (lbs/bu)	61.8	61.3	61.2	6.2	61.5	61.8	61.6
Test Weight (kg/hl)	81.3	80.6	80.4	81.7	80.8	81.3	81.0
Vitreous Kernels (%)	60	66	57	73	81	72	70
1000 Kernel Weight (gm)	34.1	32.5	34.5	30.9	30.6	32.0	32.1
Protein: 12%/0% moisture	14.2/16.2	13.9/15.8	14.1/16.0	14.2/16.1	15.4/17.4	14.3/16.2	14.4/16.3
Ash: 14% moisture (%)	1.51	1.57	1.48	1.56	1.52	1.57	1.54
Falling Number (sec)	405	401	389	390	398	389	393
FLOUR DATA							
Extractions (%)	68.4	69.0	69.9	67.0	67.4	67.7	68.2
Ash: 14% moisture (%)	0.53	0.50	0.47	0.49	0.50	0.52	0.50
Protein: 14% moisture (%)	13.2	12.6	12.8	12.7	14.3	13.3	13.2
Wet Gluten (%)	34.2	33.1	33.3	33.1	37.1	33.1	34.0
Falling Number (sec)	407	393	386	393	409	407	398
Amylograph Peak Viscosity							
65g FL (B.U.)	545	564	618	730	705	632	650
PHYSICAL DOUGH PROPERTIES							
Farinograph:							
Absorption (%)	63.6	61.6	62.9	63.0	62.8	61.6	62.4
Peak Time (min)	7.4	7.1	8.2	7.3	8.1	7.9	7.7
Stability (min)	11.5	11.7	15.2	12.5	16.2	11.8	13.5
Extensograph:							
Extensibility-45 min (cm)	17.1	17.8	16.7	16.3	16.8	16.2	16.8
Resistance-45 min (B.U.)	578	511	615	541	615	498	556
Area-45 min (sq cm)	124	114	130	113	130	105	118
Alveograph:							
P (mm)	95	86	96	96	85	81	89
L (mm)	131	131	119	129	140	134	131
W (joules x10^4)	415	386	411	412	415	359	396
BAKING DATA							
Absorption (%)	64.7	64.3	64.9	70.6	67.2	67.0	66.8
Dough Handling Properties	8.5	9.0	8.7	8.9	8.7	8.9	8.8
Loaf Volume (CC)	942	960	969	931	918	977	951
Grain and Texture	7.6	7.7	7.8	7.8	7.8	7.8	7.8
Crumb Color	7.6	7.7	8.0	8.0	8.0	7.7	7.9
Crust Color	9.8	9.9	9.9	10.0	9.8	9.9	9.9
Symmetry	7.8	8.5	8.4	8.5	8.0	8.7	8.4

2025 Survey background

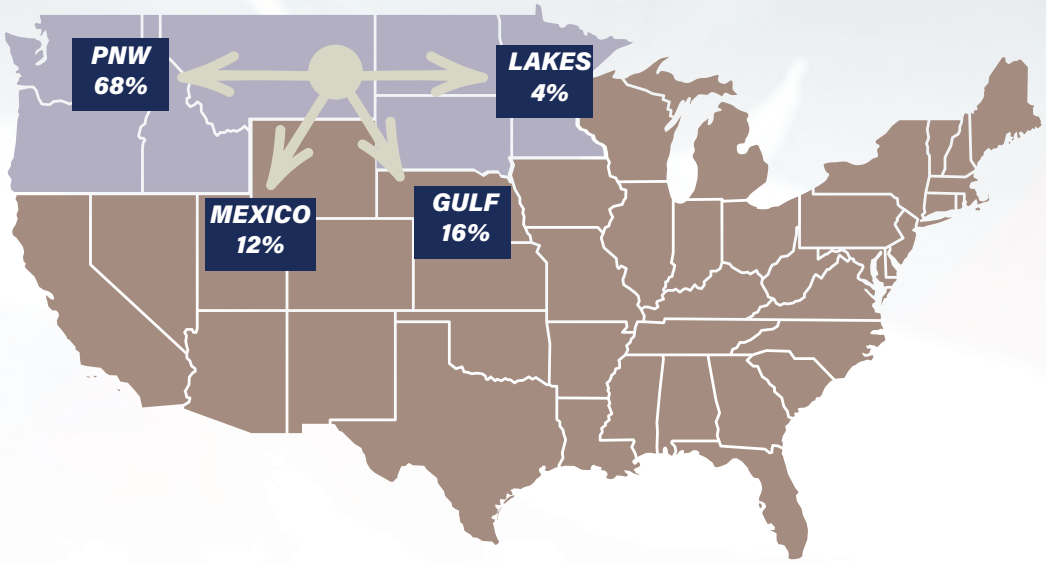
All quality data contained in this report are the result of testing and analysis conducted under the supervision of Dr. Shahidul Islam, Wheat Quality Specialist, and by his team members, Kelly McMonagle, Amber Walter, Heymant Kaur, Yun Zhao and Sultan Mahmud with the Hard Red Spring Wheat Quality Laboratory at North Dakota State University, Fargo, North Dakota, USA.

COLLECTION - The North Dakota, South Dakota, Montana and Minnesota state offices of the National Agricultural Statistics Service, and the NDSU Extension Service obtained samples during harvest directly from growers either in the fields or farm bins and local elevators. PNW samples were obtained from the Wheat Marketing Center. These samples reflect the condition of the grain at the point of origin. Sample collection is based on county production histories. A total of 744 samples were collected. Minnesota (115), Montana (149), North Dakota (377), South Dakota (80), and PNW (23).

ANALYSIS - Approximately 60 percent of the total wheat samples collected were analyzed for grade and other physical kernel characteristics, to generate distribution data. Distribution averages may differ from data averages in the various tables, because the latter are derived from all samples.

All samples collected are represented in the composite for each crop reporting area. All state and regional averages have been adjusted to reflect current year production.

AVERAGE SHARE OF U.S. HRS EXPORTS BY PORT (2021-2024)



METHODS, TERMS, SYMBOLS

Wheat

SAMPLE COLLECTION – Each sample contained approximately 2 to 3 pounds of wheat, stored in sealed, moisture-proof plastic bags.

MOISTURE – Official USDA procedure using Dickey-John Moisture Meter.

GRADE – Official United States Standards for Grain, as determined by a licensed grain inspector. North Dakota Grain Inspection Service, Fargo, ND, provided grades for composite wheat samples representing each crop reporting area.

VITREOUS KERNELS – Approximate percentage of kernels having vitreous endosperm.

DOCKAGE – Official USDA procedure. All matter other than wheat which can be removed readily from a test portion of the original sample by use of an approved device (Carter Dockage Tester). Dockage may also include underdeveloped, shriveled and small pieces of wheat kernels removed in properly separating the material other than wheat and which cannot be recovered by properly rescreening or recleaning.

TEST WEIGHT – American Association of Cereal Chemists International (AACCI) Method 55-10.01. Measured as pounds per bushel (lb/bu), kilograms per hectoliter (kg/hl) = (lbs/bu X 1.292) + 1.419. *Approved Methods of the AACCI Approved Methods (11th Edition), St. Paul, MN.

THOUSAND KERNEL WEIGHT – Based on 10 gram sample of cleaned wheat (free of foreign material and broken kernels) counted by electronic seed counter.

KERNEL SIZE DISTRIBUTION – Percentages of the size of kernels (large, medium, small) were determined using a wheat sizer equipped with the following sieve openings:

- top sieve—Tyler #7 with 2.92 mm opening;
- middle sieve—Tyler #9 with 2.24 mm opening; and
- bottom sieve—Tyler #12 with 1.65 mm opening.

PROTEIN – AACCI (NIR) Method: 39.10.01 expressed on dry basis and 12 percent moisture basis.

ASH – AACCI Method 08-01.01, expressed on a 14 percent moisture basis.

DON – Analysis was done on ground wheat using a gas chromatograph with an electron capture detector as described in J. Assoc. Official Anal. Chem 79,472 (1996)

FALLING NUMBER – AACCI Method 56.81.04; units of seconds (14 percent moisture basis).

SEDIMENTATION – AACCI Method 56.60.01, expressed in centimeters.

Flour

EXTRACTION – Samples are cleaned and tempered according to AACCI 26-01.02. The milling laboratory is controlled at 68 percent relative humidity and 72°F to 74°F. Milling is performed on a Buhler laboratory mill (Type MLU-202). Straight grade flour (of all six flour streams) is blended and reported as "flour extraction." The blended flour is rebolted through an 84 SS sieve. All mill settings are optimized to achieve maximum laboratory mill flour extraction with standardized ash content.

ASH – AACCI Method 08-01.01, expressed on a 14 percent moisture basis.

PROTEIN – AACCI Method 39.10.01 (NIR Method), expressed on a 14 percent moisture basis.

WET GLUTEN – AACCI Method 38.12.02, expressed on a 14 percent moisture basis determined with the glutomatic instrument.

GLUTEN INDEX – AACCI Method 38.12.02, determined with the glutomatic instrument as an indication of gluten strength.

FLOUR FALLING NUMBER – AACCI Method 56-81.04, units of seconds. Determination is performed on 7.0 g of Buhler milled flour (14 percent moisture basis).

AMYLOGRAM – (65 g) AACCI Method 22-10.01, modified as follows: 65 g of flour (14 percent moisture basis) are slurried in 450 ml distilled water, paddle stirrers are used with the Brabender Amylograph. Peak viscosity reported in Brabender units (B.U.), on a 14 percent moisture basis.

STARCH DAMAGE – AACCI Method 76-31.01. Amperometric method using SDmatic.

SOLVENT RETENTION CAPACITY (SRC) – AACCI 56-11.02, expressed on a 14 percent moisture basis. SRC is used to predict commercial baking performance. Flour is shaken with excess of four types of solvent, to determine the amount of solvent held by the flour. The four solvents used relate to the functionality to flour components as follows:

- **WATER** – Water absorption
- **SUCROSE** – Non-starch polysaccharides
- **LACTIC ACID** – Glutenins
- **SODIUM CARBONATE** – Damaged Starch

GLUTEN PERFORMANCE INDEX (GPI) – is a ratio of the solvents and used as an overall performance of flour glutenins especially in relation to bread wheat flour.

PHYSICAL DOUGH PROPERTIES

FARINOGRAM – AACCI Method 54-21.02; constant flour weight method, small (50 g) mixing bowl. (Flour weight 14 percent moisture basis).

ABSORPTION – Amount of water required to center curve peak on the 500 Brabender unit line, expressed on 14 percent moisture basis.

PEAK TIME – The interval, to the nearest 0.5 min, from the first addition of water to the maximum consistency immediately prior to the first indication of weakening. Also known as dough development time.

STABILITY – The time interval, to the nearest 0.5 min, between the point where the top of the curve that first intersects the 500-BU line and the point where the top of the curve departs the 500-BU line.

MIXING TOLERANCE INDEX – The difference, in Brabender units, from the top of the curve at the peak to the top of the curve measured five minutes after the peak.

QUALITY NUMBER – The length, expressed in mm, along the time axis, between the point of water addition and the point where the height in the center of the curve decreased by 30 BU compared to the height of the center of the curve at development time. Stronger flours have a higher quality number.

EXTENSOGRAM – AACCI Method 54-10.01; modified as follows: (a) 100 grams of flour (14 percent moisture basis), 2.0 percent sodium chloride (U.S.P.) and water (equal to farinograph absorption minus 2 percent) are mixed to optimum development in a National pin dough mixer; (b) doughs are scaled to 150 grams, rounded, moulded, placed in extensigram holders, and rested for 45 minutes and 135 minutes, respectively, at 30°C and 78 percent relative humidity. The dough is then stretched as described in the procedure referenced above. For conversion purposes, 500 grams equals 400 B.U.

EXTENSIBILITY – Total length of the curve at the base line in centimeters.

RESISTANCE – Maximum curve height, reported in Brabender units (B.U.).

AREA – The area under the curve is measured and reported in square centimeters.

ALVEOGRAPH – AACCI Method 54.30.02. Alveolab is used to measure dough extensibility and resistance to extension.

"P" – Maximal overpressure; related to dough's resistance to deformation.

"L" – Dough extensibility.

"W" – The "work" associated with dough deformation.

BAKING

PROCEDURE – AACCI Method 10-09.01, modified as follows: (a) fungal amylase (SKB 15) replacing malt dry powder, (b) Instant dry yeast (1 percent) in lieu of compressed yeast, (c) 5 to 10 ppm ammonium phosphate, where added oxidants are required, (d) 2 percent shortening added. Doughs are mechanically punched using 6-inch rolls, and mechanically moulded using a National Laboratory Test moulder. Baking is accomplished in "Shogren-type" pans.

BAKING ABSORPTION – Water required for optimum dough baking performance, expressed as a percent of flour weight on a 14 percent moisture basis.

DOUGH CHARACTER – Handling conversion assessed at panning on a scale of 1 to 10 with higher scores preferred.

LOAF VOLUME – Rapeseed displacement measurement made 30 minutes after bread is removed from the oven.

CRUMB GRAIN AND TEXTURE – Visual comparison to standard using a constant illumination source. Scale of 1 to 10, the higher scores preferred.

CRUMB COLOR – Visual comparison with a standard using a constant illumination source on a scale of 1 to 10, the higher scores preferred.

CRUST COLOR –Visual comparison with a standard using a constant illumination source on a scale of 1 to 10, the higher scores preferred.

SYMMETRY – Visual comparison with a standard using a constant illumination source on a scale of 1 to 10, the higher scores preferred.

Varietal information

The U.S. hard red spring wheat growing region is fairly diverse due to differences in growing season length, annual precipitation, temperatures and cropping practices. Pest and disease challenges also vary across the region. This means one variety, or even just a few varieties, cannot meet the needs of all producers across the region.

Both public and private breeding programs develop varieties for the HRS growing region to meet the diverse agronomic needs of producers, and optimize the performance of a variety for particular climatic conditions, and prevalent pest and disease threats. Some of the more prominent priorities in variety development are yield, protein content, straw strength, drought tolerance, and resistance to leaf and head diseases. In some parts, resistance to the wheat stem fly is a critical trait, while other areas need tolerance to low PH soils, or resistance to Fusarium Head blight or Bacterial Leaf Streak.

Wheat breeders develop varieties to meet the needs of long-standing agronomic challenges for growers in the HRS region, but also need to readily adapt programs to unforeseen and emerging challenges, adding to the complexity of wheat breeding. Promising lines are tested in field trials across multiple years, and growing locations, to ensure stability of traits, prior to commercial release. Once approved for commercial release, the Foundation seed material will be increased in production by select seed growers. This seed is than sold commercially to growers in the following year, or years. It may take up to 8-10 years from the initial cross of two parent lines before a variety from that breeding cross is available to producers.

End-use quality performance has long been a priority for the breeding programs in the region. The HRS class is known for high protein content, strong dough properties, high water absorption and excellent bread baking properties. Maintaining this quality reputation amongst customers is important to producers in the region, and extensive efforts are undertaken to educate wheat breeding programs to focus on both agronomic and end-use quality traits in varieties. Producer education is also important, encouraging growers to produce varieties that meet or exceed the quality demands of HRS customers, and not just focus on yield.

Given the diverse agronomic needs of growers, and the diverse environmental conditions across the region, it is important that all breeding programs in the HRS region are targeting the same quality parameters in their varieties. This promotes consistent quality within the HRS class. Wheat class quality targets were developed by the greater hard red spring wheat industry to assist wheat breeders in this effort. Listed below are the current quality targets for the U.S. hard red spring wheat class.

QUALITY TARGETS U.S. HRS (KERNEL & MILLING QUALITY)

GRADE/KERNEL

TW	60 lb/bu
Protein (12% basis)	14.5%
Ash (14% basis)	<1.65%
Vitreous kernels	>80%
Falling #	>400 seconds

MILLING

Extraction	70% (Buhler Lab Mill @.48 ash)
Protein loss	<1%
Flour color	L*value of 90

QUALITY TARGETS U.S. HRS (DOUGH/BREAD QUALITY)

FARINOGRAPH

Absorption	>64%
Stability (minutes)	15 - 17

BREAD

Loaf volume	>1050 cc

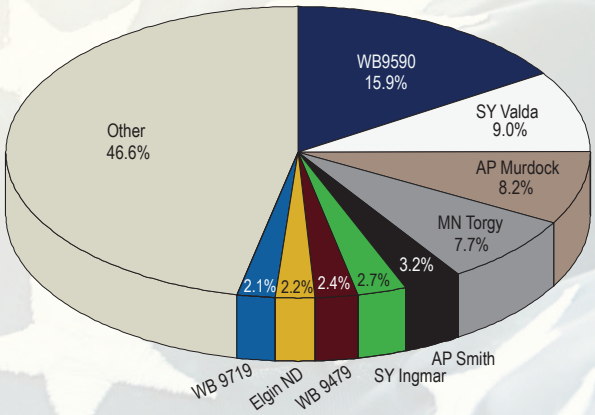
North Dakota

WB 9590 remains the top planted variety in North Dakota with nearly 16% of the acreage share, up from last year. A 2017 release from WestBred, WB 9590 is popular with producers for its strong straw, high yield potential and moderately high protein. It is also the second most popular variety in Minnesota with 19% of the acreage. WB 9590 is rated as good for milling and baking quality.

SY Valda is again the second most popular variety in North Dakota with 9% of the planted acreage, similar to last year. It is also the fourth most popular variety in Minnesota. It is a 2015 release from Syngenta/AgriPro with very good yield potential, good straw strength and good disease tolerance. The variety has average milling and baking quality.

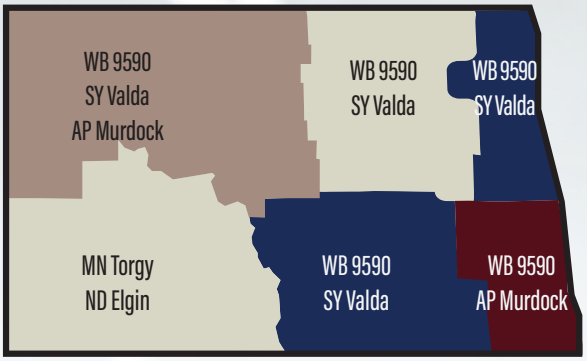
AP Murdock is the third most popular variety in the state with an 8% share of acreage, down slightly from last year. AP Murdock is a 2019 release from AgriPro/Syngenta and shows good yield potential and straw strength, good disease tolerance and strong protein levels. The variety is on the higher end of the spectrum for milling and baking quality.

NORTH DAKOTA VARIETY SHARE OF PLANTED ACRES



1. Percentage may not add to 100 due to rounding.
2. Includes varieties with less than 1% of acreage and unknown varieties.
3. (1 acre = 0.405 hectares)
   2025 – 5,100,000 planted acres
   2024 – 5,350,000 planted acres

TOP NORTH DAKOTA VARIETIES BY CROP DISTRICT



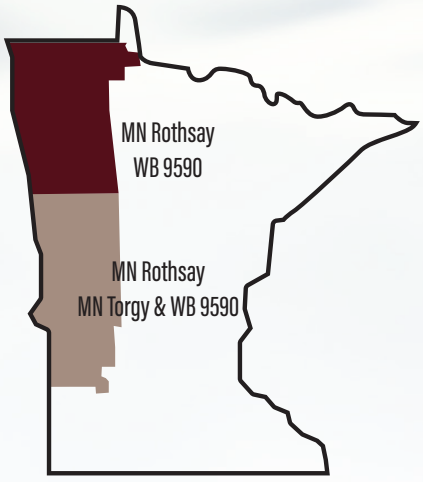
Don Hardy filling grain carts - Beach, ND

Minnesota

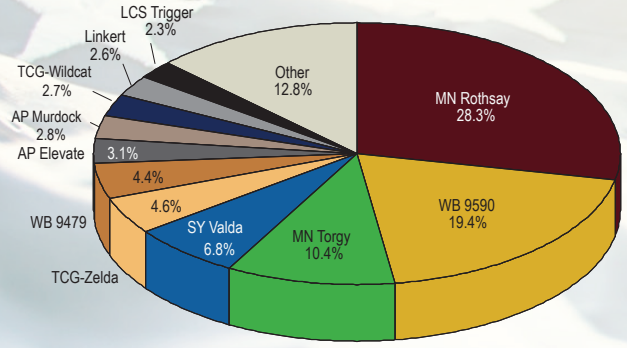
MN ROTHSAY moved to the top position in planted varieties in Minnesota with 28% of the acreage. It is a 2022 release from the University of Minnesota that features a good combination of yield, protein, and disease resistance and exceptional straw strength. The straw strength feature of the variety is one reason for its increased popularity amongst producers.

MN TORGY is the third most popular variety in Minnesota with a 10% share of the acreage. MN Torgy is also the fourth most popular variety in North Dakota. It is a 2020 release from the University of Minnesota that features strong straw strength, excellent disease tolerance and high yield potential. It is rated as average for milling and baking quality.

TOP MINNESOTA VARIETIES BY CROP DISTRICT



MINNESOTA VARIETY SHARE OF PLANTED ACRES



1. Percentage may not add to 100 due to rounding.
2. Includes varieties with less than 1% of acreage and unknown varieties.
3. (1 acre = 0.405 hectares)
   2025 – 1,150,000 planted acres
   2024 – 1,220,000 planted acres

South Dakota

There is no official wheat variety survey in South Dakota, however, the top planted varieties in the state are:

- Ascend - SD
- SY Valda
- MN Torgy
- Brawn - SD
- Enhance - SD

ASCEND-SD was released in 2021 by South Dakota State University. The variety has become quite popular in SD and is known for its high yield potential and disease resistance, combined with good test weight and protein content. Milling and baking qualities are above average.

Released in 2022 by South Dakota State University, **BRAWN-SD** is best known for its high yield potential and test weight. Milling and baking qualities are average.

ENHANCE-SD was released in 2024 by South Dakota State University. It is known for its high yield potential and protein content as well as disease resistance and early-maturity. Milling and baking qualities are above-average.

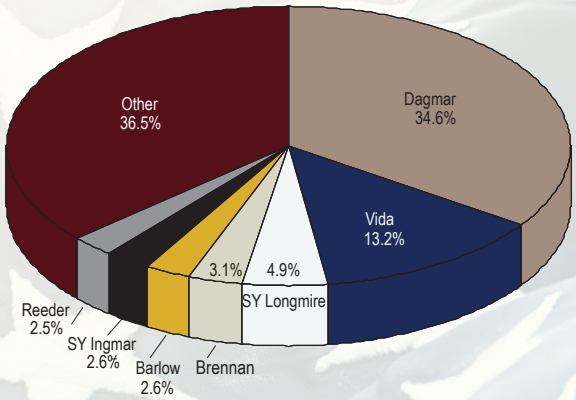
Montana

DAGMAR remains the top variety planted in Montana with nearly 35% of the acreage, up from last year. One reason for its popularity is that it is a solid stem variety that shows a high level of resistance to wheat stem sawfly. It is a 2019 release from Montana State University (MSU) with excellent yield potential, high protein content and good milling and baking quality.

VIDA is the second most popular variety grown in Montana with 13% of the acreage, a decline from the previous two years after a long stint as the most popular variety. It is a 2005 release from MSU with strong yield potential and moderate resistance to leaf and stripe rust. Vida is rated as good for milling and baking quality.

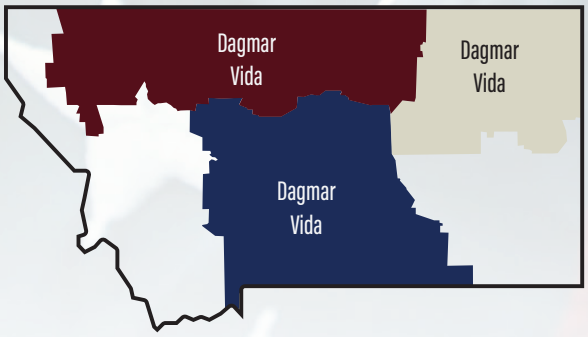
SY LONGMIRE rounds out the top three varieties planted in Montana with just under 5% of the planted acreage, down slightly from last year. It is a 2019 release from Syngenta/AgriPro with very good yield potential and good protein levels. SY Longmire is a solid stem variety that is highly tolerant to wheat stem sawfly and is medium to short in plant height. It is rated as good for milling and baking quality.

MONTANA VARIETY SHARE OF PLANTED ACRES



1. Percentage may not add to 100 due to rounding.
2. Includes varieties with less than 1% of acreage and unknown varieties.
3. (1 acre = 0.405 hectares)
   2025 – 2,150,000 planted acres
   2024 – 2,450,000 planted acres

TOP MONTANA VARIETIES BY CROP DISTRICT



Idaho

There is no official wheat variety survey in Idaho, however, the top planted varieties in the state are:

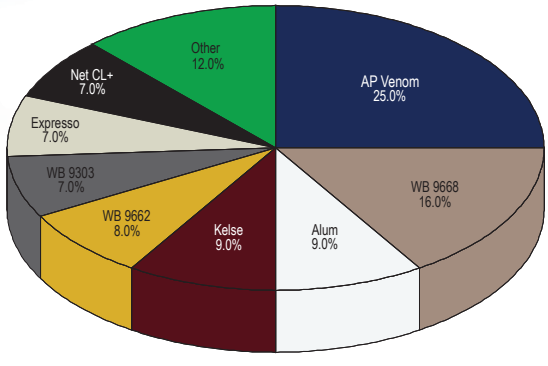
- WB 9668
- Jefferson
- Net CL+

Washington

AP VENOM is the top variety in Washington with 25% of the acreage. A 2020 release from AgriPro/Syngenta, it has very good straw strength and high yield potential with good protein. AP Venom has shown above average baking and milling characteristics

WB 9668 is the second largest variety planted in Washington with 16% of the acreage and one of the top varieties grown in Idaho. The variety was released in 2014 from WestBred/Bayer and has excellent yield potential and standability. It has excellent protein content and good milling and baking quality.

WASHINGTON VARIETY SHARE OF PLANTED ACRES



2025 U.S. HARD RED SPRING WHEAT

REGIONAL QUALITY REPORT

FUNDING & SUPPORT PROVIDED BY:

U.S. WHEAT ASSOCIATES

NORTH DAKOTA WHEAT COMMISSION

MONTANA WHEAT AND BARLEY COMMITTEES

MINNESOTA WHEAT RESEARCH AND PROMOTION COUNCIL

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