

**Canada Western Red Spring (CWRS) wheat****Harvest quality data for No. 1 CWRS, western prairie aggregates¹**

Quality parameter ²	2024		2023	
Wheat				
Test weight, kg/hL	82		82	
Weight per 1000 kernels, g	31.0		33.3	
Protein content, %	14.4		14.2	
Protein content, % (dry matter basis)	16.7		16.4	
Ash content, %	1.51		1.46	
Falling Number, seconds	416		414	
Milling flour yield - Bühler laboratory mill				
Clean wheat basis, %	75.9		76.0	
Flour, extraction (%) for analysis	74	60	74	60
Protein content, %	13.6	13.5	13.6	13.5
Protein loss, %	0.8	0.9	0.6	0.7
Wet gluten content, %	37.4	36.4	37.5	36.1
Gluten index, %	95.1	97.1	95.0	97.3
Ash content, %	0.44	0.38	0.43	0.39
Dough sheet brightness (L*) at 2h ³	75.8	77.1	76.7	78.2
Dough sheet redness (a*) at 2h ³	1.9	1.7	2.0	1.6
Dough sheet yellowness (b*) at 2h ³	25.8	26.7	26.1	25.8
Starch damage, %	7.9	7.7	7.9	7.7
Amylograph peak viscosity, BU	672	742	631	663
Farinogram, 50 g bowl				
Absorption, %	65.2	64.7	65.8	65.1
Dough development time, minutes	7.9	17.3	7.6	8.7
Stability, minutes	13.6	28.3	11.9	25.7
Mixing tolerance index, BU	18	5	22	9
Farinogram, 300 g bowl⁴				
Absorption, %	66.1	65.1	66.6	65.5
Dough development time, minutes	8.9	10.3	7.0	11.5
Stability, minutes	19.6	50.1	16.5	47.5
Mixing tolerance index, BU	17	0	10	0
Extensogram (135 minutes), standard method⁵				
Maximum resistance, BU	713	880	634	847
Extensibility (length), cm	20.1	19.8	20.6	17.9
Area, cm ²	178	211	163	183
Extensogram (90 minutes), pin mixer method⁶				
Maximum resistance, BU	567	679	590	628
Extensibility (length), cm	18.5	17.9	17.7	16.1
Area, cm ²	129	151	126	127
Alveogram				
P (maximum over pressure), mm H ₂ O	120	131	124	130
L (length), mm	124	120	121	110
P/L	0.97	1.09	1.02	1.18
W (deformation energy), 10 ⁻⁴ joules	502	535	509	505
le (elasticity index), %	64.2	64.0	63.7	64.1



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Quality parameter ²	2024		2023	
Baking (Canadian short process)				
Absorption, %	67	67	69	69
Mixing time, minutes	5.3	5.8	5.2	5.4
Mixing energy, Wh/kg	14.0	15.1	14.2	13.9
Loaf volume, cm ³ /100 g flour	980	984	969	970
Baking (Sponge and dough)				
Absorption, %	63	63	65	65
Mixing time, minutes	4.1	4.3	3.5	3.7
Mixing energy, Wh/kg	7.3	7.4	6.5	6.4
Loaf volume, cm ³ /100 g flour	1154	1106	1042	1059

¹ No. 1 CWRS samples were obtained from the Canadian Grain Commission's Harvest Sample Program. Western prairies aggregate region includes British Columbia, Alberta and western Saskatchewan (regions 5, 7-10 on crop region map).

² Data are reported on a 13.5% moisture basis for wheat and a 14.0% moisture basis for flour, except Alveogram results which are reported on a 15% moisture basis. For more information refer to Methods and tests used by the Canadian Grain Commission to measure the quality of wheat.

³ Colour measured with Minolta CR-410 with D65 illuminant. For more information refer to our colour – water dough sheet method.

⁴ New parameter starting 2022 (Farinograph results were historically generated with only a 50 g bowl).

⁵ The Farinograph used to mix dough for the Extensograph was replaced with a new model in 2024. For comparison purposes, the 2023 aggregate samples, which had been stored in freezer, were retested with the 2024 aggregate samples after mixing with the new Farinograph model.

⁶ An additional test reported on in 2024. The fully developed dough was prepared using a Swanson-type pin mixer to 10% past peak time with 1% salt (flour weight basis) and Farinograph absorption of plus 4%. For more information refer to our Extensogram - pin mixer method

Farinogram and Extensogram Curves

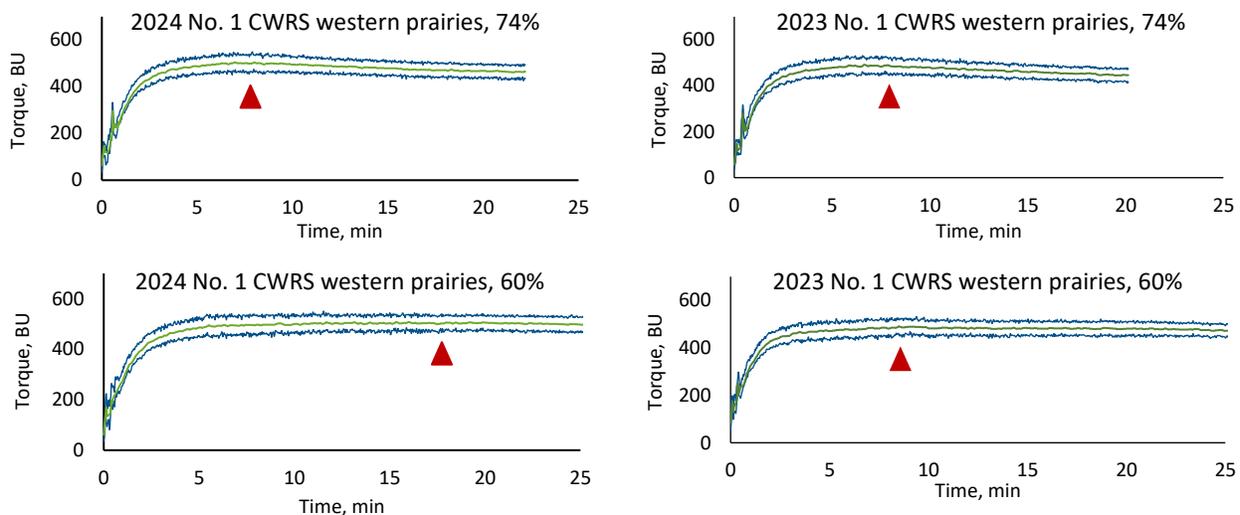


Figure 1. Examples of Farinograms (50 g bowl) generated from flour with extraction rates of 74% and 60% for western prairies aggregate samples of No. 1 CWRS from the 2023 and 2024 crop years. Minimum and maximum torque values (blue), mean torque values (green) and dough development time (red arrow) are shown.



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Farinogram and Extensogram Curves

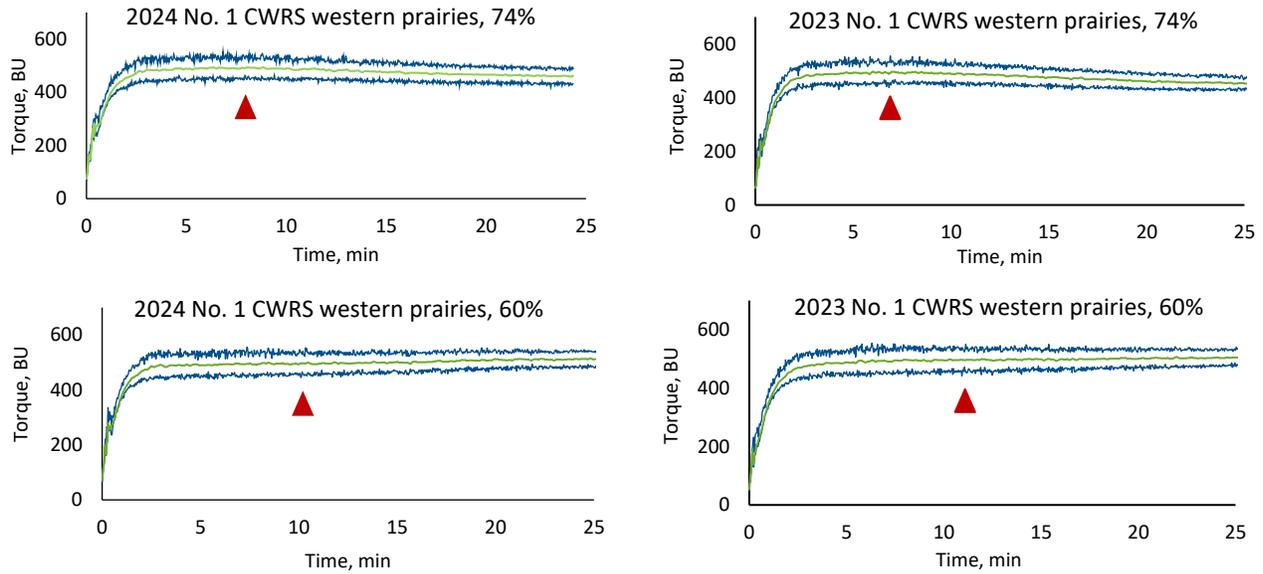


Figure 2. Examples of Farinograms (300 g bowl) generated from flour with extraction rates of 74% and 60% for western prairies aggregate samples of No. 1 CWRS from the 2023 and 2024 crop years. Minimum and maximum torque values (blue), mean torque values (green) and dough development time (red arrow) are shown.

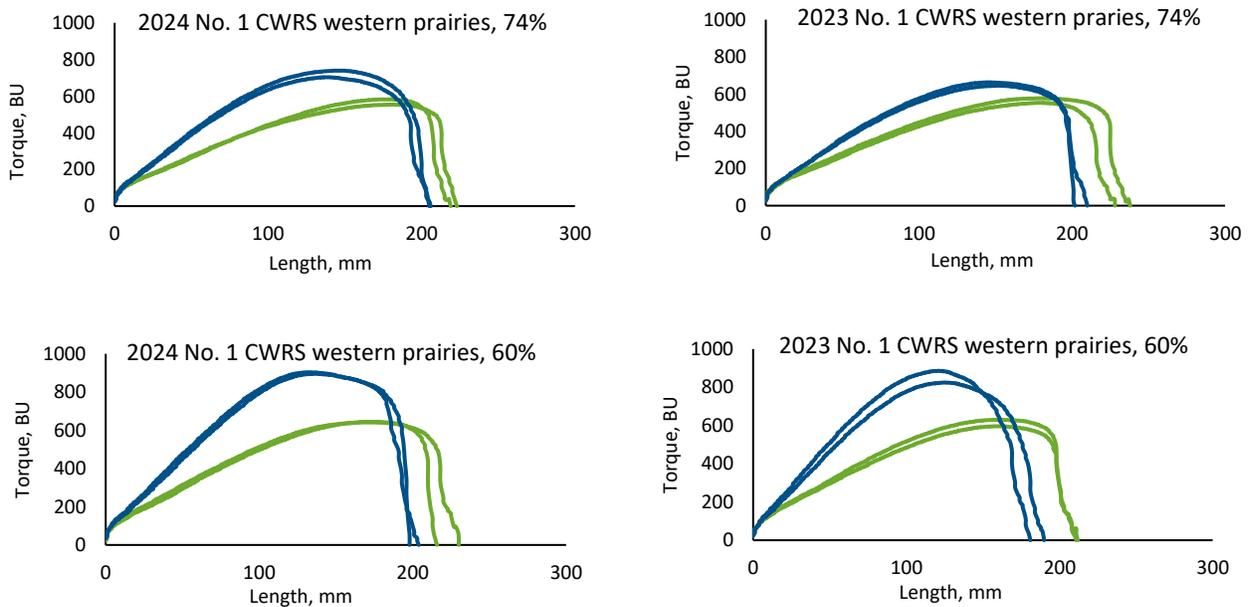


Figure 3. Examples of Extensograms at 45 minutes (green) and 135 minutes (blue) generated from flour with extraction rates of 74% and 60% for western prairies aggregate samples of No. 1 CWRS from the 2023 and 2024 crop years.