

LOCAL WHEAT VARIETIES TRIAL

Gateway Research Organization (GRO) has been actively involved in Regional Variety Trials (RVTs) since 1988, playing a crucial role in evaluating and comparing the performance of different crop varieties under regional conditions. These trials have provided valuable insights into the adaptability, yield potential, and agronomic performance of numerous wheat varieties.

However, not all locally grown wheat varieties are included in the RVT program, sparking interest among regional producers who seek direct comparisons between newer varieties in the RVT program and the most widely cultivated, established varieties in the area. Addressing this gap would give producers a clearer understanding of how emerging varieties compare to their current options, helping them make more informed decisions based on their agronomic and economic goals.

In the early spring of 2025, GRO's Crop Committee met with GRO staff to determine the wheat varieties to be included in the local wheat variety trial. The trial was established with 24 entries, consisting of 10 CWRS, 7 CPSR, 1 CNHR, 2 CWSWS and 4 CWSP varieties.

AGRONOMIC INFORMATION:

Seeded: May 2, 2025

Seed depth: 1 ¼ inch

Soil temperature: 12°C

Rainfall recorded: May 1 to August 26, 2025: 192.2 mm

Fertilizer:

Side Banded: 28.8-1.7-14.4-4.8 @ 416.8lbs/ac

120 lbs/ac Actual N; 7.2 lbs/ac Actual P; 60 lbs/ac Actual K; 20 lbs/ac Actual S

Seed Placed: 11-52-0 @ 53.5 lbs/ac

5.9 lbs/ac Actual N; 27.8 lbs/ac Actual P

Herbicide Application: 2,4 -D @ 300 ml/ac on June 3, 2025

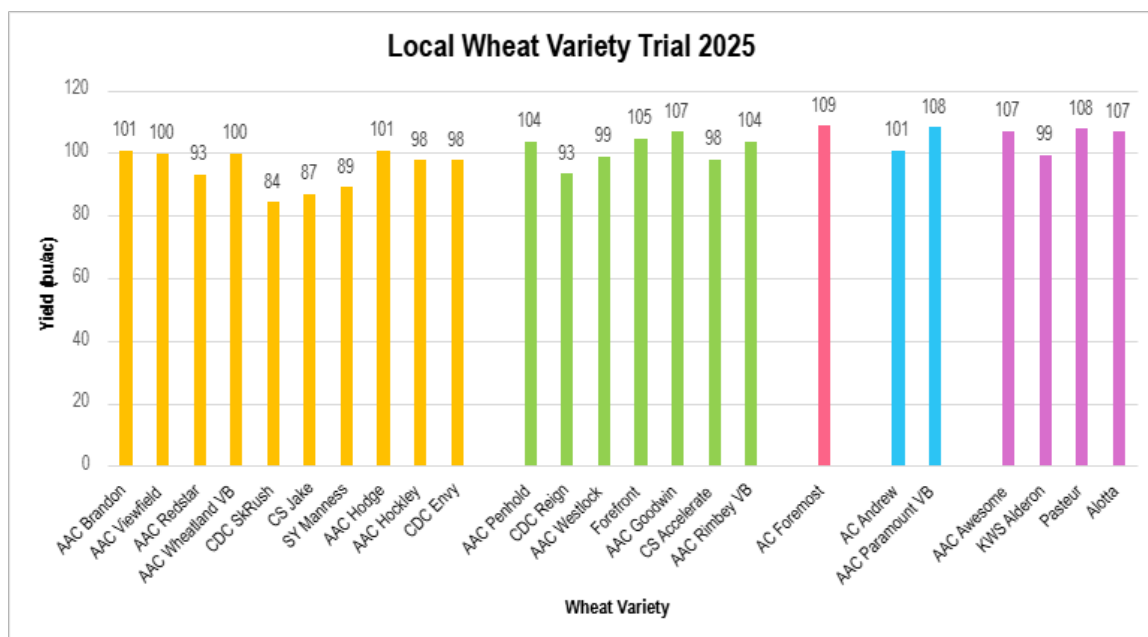
Harvested: August 27, 2025

Following harvest, grain samples were collected and analyzed using a Near-Infrared (NIR) Spectroscopy machine to assess key quality parameters.

LOCAL WHEAT VARIETY TRIAL - GRO, WESTLOCK - 2025

Adjusted @ 13.5 % Moisture															
Trt No.	Treatment Name	Wheat Class	Yield (kg/ha)		Yield (bu/ac)	Bushel Weight (lb/bu)	Test Weight (kg/HL)	1000 KWT (g)	Protein (%)	Gluten (%)					
1	AAC Brandon	CWRS	6783	cde	101	67.9	ab	83.3	a-d	37.1	c-h	13.8	bcd	33.6	bc
2	AAC Viewfield		6689	de	100	67.0	abc	83.0	a-e	32.7	g-j	14.2	abc	34.1	abc
3	AAC Redstar		6246	f	93	67.3	abc	83.0	a-e	35.2	e-i	13.8	bcd	33.2	bcd
4	AAC Wheatland VB		6713	de	100	68.7	ab	84.7	abc	37.8	c-g	13.2	de	32.3	cd
5	CDC SkRush		5701	h	84	66.7	abc	82.0	a-e	31.1	ij	14.3	abc	34.2	abc
6	CS Jake		5839	gh	87	67.3	abc	83.0	a-e	32.4	g-j	14.9	a	35.5	a
7	SY Manness		6000	g	89	66.3	abc	81.7	b-e	30.0	j	14.3	abc	34.2	abc
8	AAC Hodge		6783	cde	101	69.3	a	85.7	a	37.5	c-h	13.3	de	33.3	bc
9	AAC Hockley		6568	e	98	68.4	ab	84.3	a-d	35.4	e-i	14.4	ab	34.3	ab
10	CDC Envy		6576	e	98	66.7	abc	82.3	a-e	37.4	c-h	13.4	de	32.6	bcd
11	AAC Penhold	CPSR	6983	bcd	104	68.7	ab	85.0	ab	42.9	ab	12.6	efg	29.8	e
12	CDC Reign		6274	f	93	67.0	abc	82.0	a-e	34.6	f-j	13.5	cd	32.8	bcd
13	AAC Westlock		6674	de	99	68.0	ab	84.0	a-d	42.3	abc	12.4	fgh	29.0	ef
14	Forefront		7048	abc	105	66.7	abc	82.0	a-e	40.5	b-e	12.4	fgh	29.7	e
15	AAC Goodwin		7200	ab	107	68.7	ab	84.7	abc	37.5	c-h	13.3	de	31.4	d
16	CS Accelerate		6587	e	98	67.7	ab	83.3	a-d	33.2	g-j	13.3	de	31.4	d
17	AAC Rimbey VB		6987	bcd	104	67.7	ab	83.3	a-d	41.2	bcd	11.7	hij	27.4	fg
18	AC Foremost	CNHR	7323	a	109	68.0	ab	83.7	a-d	40.5	b-e	12.3	f-i	29.2	ef
19	AC Andrew	CWSWS	6788	cde	101	64.7	c	79.7	e	32.1	hij	11.7	hij	26.2	gh
20	AAC Paramount VB		7275	ab	108	66.0	bc	81.0	cde	37.1	c-h	11.2	j	24.9	h
21	AAC Awesome	CWSP	7206	ab	107	66.0	bc	81.3	b-e	37.8	c-g	11.3	j	25.0	h
22	KWS Alderon		6708	de	99	53.3	d	65.7	f	36.7	d-h	13.0	def	28.4	ef
23	Pasteur		7276	ab	108	67.7	ab	83.3	a-d	38.8	b-f	12.1	ghi	29.0	ef
24	Alotta		7149.7	ab	107	65.7	bc	80.7	de	45.4	a	11.5	ij	27.5	fg
LSD P=.05 (% mean diff)			202.04 (3%)	2.97 (3%)	1.65 (3%)		1.97 (3%)	3.1216 (9%)	0.541 (5%)	1.205 (4%)					
Standard Deviation			122.78	1.8	1.0		1.2	1.897	0.329	0.732					
CV			1.83	1.81	1.5		1.46	5.13	2.54	2.39					

Means followed by same letter or symbol do not significantly differ (P=.05, Student-Newman-Keuls).



RESULTS AND DISCUSSION:

In the CWRS class, AAC Hodge and AAC Brandon did really well, hitting impressive yields of 101 bushels per acre. AAC Goodwin led the CPSR class in yield as well. We observed no lodging, and plant height varied very little among the different varieties. These results suggest that the lack of precipitation prevented the varieties from reaching their full genetic potential.

For context, under optimal growing conditions, Canada Western Special Purpose (CWSP) varieties usually out-yield Canada Western Red Spring (CWRS) varieties by about 20 to 30 percent. This year, though, CWSP wheat had higher protein levels instead of higher yields, which is common in dry seasons. It shows the usual trade-off, when water is limited, wheat tends to have more protein but lower yield.

It is important to emphasize that while some varieties performed better than others in this trial, this does not necessarily mean they are the best options in every situation. These results are based on a single year at a single site, and varietal performance is influenced by a range of factors, including genetics, soil conditions, weather patterns, and fertility management. For a more complete understanding of individual varieties, please refer to the January 2026 edition of the Alberta Seed Guide.

ACKNOWLEDGEMENTS:

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