

Wheat and Durum Variety Trial

Summary

Wheat variety trials were conducted during 2019 to evaluate the performance of several varieties in east-central Alberta. Varieties of durum, winter wheat, CPSR-CNHR, CWRS & CWSWS, CWSP & CWSWS wheat were tested at Oyen and Acadia Valley. These variety trials are part of Alberta's and Saskatchewan's Regional Variety Testing Program. Durum planted at the Oyen site is not reported due to a high CV (yields were affected by herbicide tolerant kochia).

More information on varieties is available in the seed.ab.ca seed guide published by the Alberta Seed Industry Partnership, the www.seed.ab.ca website or the Varieties of Cereal and Oilseed Crops report on the Alberta Agriculture and Rural Development website at www.agric.gov.ab.ca. Feel free to call the CARA office with your questions.

Cooperators: Vince Grudecki, Acadia Valley SE 28-24-02-W4
Scory Estate Oyen NW 35-27-07-W4

Project Description and Precipitation Summary – see “Variety Trials” report section.

Site Information:

Table 1 **Soil Analysis**

Soil Analysis	Acadia Valley	Oyen
Nitrogen* (0-24")	24 lb/A (D)	66 lb/A (D)
Phosphorus* (0-6")	12 lb/A (D)	28 lb/A (D)
Potassium* (0-6")	1200 lb/A (E)	645 lb/A (O)
Sulfate* (0-24")	13 lb/A (M)	71 lb/A (O)
Soil Salinity* (E.C.)	0.43 (G)	0.64 (G)
pH	8 (alkaline)	7.7 (alkaline)
OM (%)	4.6 (normal)	2.5 (normal)
Soil Texture	Clay	Loam

* D = Deficient, M = Marginal, O = Optimum, E = Excess,

Table 2 **Precipitation 2019 (inches)**

Month	Acadia Valley	Oyen
May	0.1	0.1
June	2.8	2.3
July	1.2	2.3
August	1.8	1.1
Total	5.9	5.8

Table 3 **Agronomic Information 2019**

	Acadia Valley	Oyen
Previous crops	Lenitls	Cocktail Mix
Seeding Date	May 15	May 23
Seeding Depth	1.5-2 inches	1.5-2 inches
Seedbed Condition	Dry soil conditions	
Seeding Rate	18 plants per square foot	
Fertilizer*	266 lb/A 26-18-5-3	150 lb/A 26-18-5-3
Seeder**	Henderson 500 drill	
Seedbed Preparation	Pre-seed glyphosate	
Herbicide	Buctril M + Achieve Liquid Gold +Turbocharge	
Fungicide	None applied	
Harvest Dates:		
Wheat: CWSP-CWSWS	Sept 3	
CPRS-CNHR	Sept 3	
CWRS-CWSH	Sept 23	
Durum: Nutrien, Sask	Sept 3	
AB RVT	Sept 23	Oct 10

*placed between paired rows ** 5 paired rows on 11" spacing

Results:

Table 4a **Alberta RVT Durum – Acadia Valley 2019**

Variety	Yield (lb/A)	Yield (bu/A at 60 lb/bu)	Yield % of Strongfield	Height (cm)	Protein (%)	Bu Wt (lb/bu)	TKW (grams)
AAC Grainland	2841	47	128.1	94	12.6	63	3836
AAC Stronghold	2482	41	111.9	92	12.4	66	44.2
AAC Succeed VB	2824	47	127.3	95	12.2	64	41.4
Brigade	2574	43	116.0	98	11.6	65	42.8
CDC Alloy	2396	40	108.0	96	13.0	64	37.8
CDC Credence	2582	43	116.4	96	12.1	64	40.5
DT1004	2864	48	129.1	103	11.9	65	41.0
DT591	2632	44	118.6	94	12.7	62	39.2
DT887	2676	45	120.7	10	12.8	64	39.3
DT890	3034	51	13.8	93	11.7	65	39.0
Strongfield	2218	37	100.0	92	12.7	64	38.0
Transcend	2979	50	134.3	102	11.5	65	38.4
Mean	2676	45		96.5	12.3	64	40.0
LSD (0.05)	627			8.4			3.8
C.V. %	13.85			5.11			5.6

Table 4b Nutrien Durum – Acadia Valley 2019

Variety	Yield (lb/A)	Yield (bu/A at 60 lb/bu)	Yield % of Strongfield	Height (cm)	Protein (%)	Bu W (lb/bu)	TKW (grams)
AAC Congress	2637	44	95.9	88	12.7	63	37.3
AAC Marchwell	2484	41	90.3	89	13.2	63	36.8
AAC Raymore	2622	44	95.3	95	12.8	63	38.7
AAC Spitfire	3432	57	124.8	91	12.0	64	43.7
CDC Alloy	2654	44	96.5	90	13.2	63	37.0
CDC Brigade	2991	50	108.8	101	12.4	64	40.4
CDC Carbide	2518	42	91.6	95	13.8	62	34.9
CDC Dynamic	2609	44	94.9	93	13.6	63	36.1
CDC Fortitude	2395	40	87.1	89	14.2	62	34.7
CDC Precision	2595	43	94.4	94	13.9	64	37.0
DT1003	2478	41	90.1	90	13.5	63	34.7
DT591	2593	43	94.3	95	13.7	61	36.1
Strongfield	2750	46	100.0	95	13.4	63	38.3
Transcend	2850	48	103.6	103	12.6	63	38.0
Mean	2686	45		93	13.2	63	37

Table 4c Saskatchewan RVT Durum Trial – Acadia Valley 2019

Variety	Yield (lb/A)	Yield (bu/A at 60 lb/bu)	Yield % of Strongfield	Protein (%)	Bushel Weight (lb/bu)	TKW (grams)
AAC Congress	3011	50	108.7	11.7	64	37.7
AAC Grainland	2883	48	104.3	13.6	62	36.6
AAC Stronghold	2952	49	106.5	13.4	65	38.6
AAC Succeed VB	3178	53	115.2	12.3	64	39.5
CDC Alloy	2640	44	95.7	13.3	63	34.7
CDC Credence	3248	54	117.4	12.2	63	36.3
CDC Dynamic	3208	53	115.2	12.9	65	37.1
CDC Precision	3435	57	123.9	12.8	65	38.6
DT1003	2954	49	106.5	12.3	63	34.2
DT1004	3093	52	113.0	12.7	65	39.0
DT591	2939	49	106.5	12.8	63	36.8
DT887	3015	50	108.7	13.5	63	36.4
DT890	3181	53	115.2	12.6	64	36.9
Strongfield	2767	46	100.0	12.7	63	36.4
Mean	3036	51	110	13	64	37

Table 5. CPSR-CNHR Wheat – Acadia Valley 2019

Variety	Yield (lb/A)	Yield (bu/A at 60 lb/bu)	Yield % of Carberry	Height (cm)	Protein (%)	Bu Wt (lb/bu)	TKW (grams)
AAC Brandon	2818	47	107.1	82	12.1	63	35.6
AAC Castle	2574	43	97.8	76	12.8	63	32.8
AAC Penhold	2659	44	101.1	80	12.5	63	35.3
AC Foremost	2688	45	102.2	79	12.8	63	30.9
Carberry	2631	44	100.0	74	12.3	63	34.6
CDC Terrain	2240	41	94.3	83	12.1	61	29.7
HY2068	2487	41	94.5	82	12.3	61	32.5
HY2077	2657	44	101.0	76	11.9	62	28.9
Mean	2623	44		79	12.3	62	32.5
LSD (0.05)	481						
C.V. %	10.46						

Table 6. CWSP & CWSWS Wheat – Acadia Valley 2019

Variety	Yield (lb/A)	Yield (bu/A at 60 lb/bu)	Yield % of Carberry	Height (cm)	Protein (%)	Bu Wt (lb/bu)	TKW (grams)
AAC Brandon	2184	36	100.5	79	13.6		28.6
AAC Paramount	3050	51	140.4	82	10.7		34.2
AC Andrew	2989	50	137.6	79	11.6		31.1
AC Sadash	2894	48	133.2	83	11.3		30.0
Carberry	2173	36	100.0	80	13.3		30.2
GP214	3121	52	143.6	70	10.8		36.2
Pasteur	3315	55	152.5	80	10.8		33.3
Mean	2823			78.93	11.7		31.97
LSD (.05)	664			6.02			3.97
C.V. %	13.25			4.29			6.98

Table 7 CWRS & CWSH Wheat – Acadia Valley 2019

Variety	Yield (lb/A)	Yield (bu/A at 60 lb/bu)	Yield % of Carberry	Height (cm)	Protein (%)	Bu Wt (lb/bu)	TKW (grams)
AAC Alida VB	1936	32	82.1	87	12.8	62	33.6
AAC Brandon	2294	38	97.3	85	12.4	63	33.9
AAC Cirrus	2217	37	94.1	88	13.4	63	30.0
AAC Jatharia VB (BW483)	1807	30	76.7	98	13.1	63	31.3
AAC Leroy VB (BW1049)	2123	35	90.1	83	12.9	61	31.8
AAC Magnet (BW1045)	1950	32	82.7	87	13.8	61	34.8
AAC Starbuck (BW50110)	2383	40	101.1	86	12.6	63	32.1
AAC Viewfield (BW965)	2605	43	110.5	83	12.6	63	32.1
AAC Warman VB (BW1025)	2012	34	85.4	89	13.3	61	31.7
AAA Wheatland VB(BW5013)	2035	34	86.3	86	12.8	62	31.9
Bolles	2138	36	90.7	81	14.0	61	32.6
BW1046	1441	24	61.1	93	13.5	41	29.1
BW 5028	2358	39	100.0	86	12.7	62	34.2
BW5031	2227	37	94.5	84	12.5	62	35.0
BW5056	2168	36	91.9	82	13.6	62	31.5
Carberry (BW874)	2358	39	100	88	13.2	62	33.2
CDSC Go	2110	35	89.5	85	12.6	59	33.1
CDC Landmark VB (BW971)	2355	39	99.9	85	13.2	63	33.1
CDC Select 1	1707	28	72.4	96	12.9	63	31.3
CDC Jake (PT782)	1395	23	59.2	91	12.9	61	28.8
CDC Tracker (PT785)	1437	24	60.9	83	14.7	58	25.0
CS-11200104-11	1974	33	83.7	80	13.5	61	30.7
CS-11200217-17	2182	36	92.5	86	12.6	62	34.4
Ellerslie	1536	26	65.1	86	14.4	59	28.0
Parata (PT772)	1486	25	63.0	94	14.0	61	30.1
PT252	1745	29	74.0	86	13.0	62	34.1
PT488					14.4	59	
PT596	1938	32	82.2	89	13.1	60	27.5
PT598	2159	36	91.6	75	12.8	62	33.7
PT652	2068	34	87.7	97	13.8	59	28.6
Sheba (NH004)	1832	31	77.7	86	13.6	62	30.2
Stettler (BW867)	2010	33	85.3	89	13.1	61	30.2
Sy Chert (BW5005)	2129	35	90.3	88	13.4	60	30.9
Sy Gabbro (BW1041)	2350	39	99.7	85	13.9	62	35.6
Sy Obsidian (BW5007)	1984	33	84.1	85	13.6	62	31.8
SY Torach (PT650)	2242	37	95.1	77	13.6	63	29.4
Mean	1963	33.5		86.5	13.3	60.9	31.6
LSD (0.05)	431						
C.V. %	13.48						