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AAFC, the BC Ministry of Agriculture, IAF and WGRF are committed to working with industry partners. Opinions expressed in this document are those of the BC Grain Producers Association and not necessarily those of AAFC, the Ministry of Agriculture IAF or WGRF.



CANADA WESTERN RED SPRING WHEAT

As grain yields increase, protein content generally decreases. Some of the newer varieties have both higher protein and grain yield. To control true *loose smut* of wheat, only a systemic fungicide will work as the pathogen is found inside the seed. To control the other types of smut (*covered*, *false loose* and *bunt*), a non-systemic fungicide seed treatment will work as the disease pathogen is on the outside of the seed.

Variety	Yield as % of Katepwa										
	Dawson Creek				Fort St. John				B.C. Peace		
	2014 Yield		2009 - 2014		2014 Yield		2009 - 2014		2014	2009-2014	
	bu / acre	% of Check	Avg. (%)	Station Years	bu / acre	% of Check	Avg. (%)	Station Years	Avg. (%)	Avg. (%)	Station Years
5604HR CL	70	99	97	[6]	60	92	99	[6]	95	98	[12]
5605HR CL	75	105	107	[2]	67	102	106	[2]	104	107	[4]
AAC Bailey	77	106	105	[4]	65	97	104	[4]	101	105	[8]
AAC Brandon	84	118	109	[3]	74	114	118	[3]	116	113	[6]
AAC Elie	85	119	111	[3]	71	109	117	[3]	114	114	[6]
AAC Iceberg **	76	105	106	[2]	61	93	101	[2]	99	104	[4]
AAC Prevail *	77	106	106	[1]	66	100	100	[1]	103	103	[2]
AAC Redwater	75	104	100	[3]	60	90	100	[3]	97	100	[6]
AAC W1876 *	82	113	113	[1]	71	107	107	[1]	110	110	[2]
AC Barrie	63	87	94	[6]	67	103	104	[6]	95	99	[12]
BW479 * Δ	64	88	88	[1]	52	79	79	[1]	84	84	[2]
BW487 * Δ	78	111	111	[1]	72	112	112	[1]	112	112	[2]
BW961 *, *** Δ	69	96	96	[1]	66	99	99	[1]	98	98	[2]
Cardale	77	106	104	[3]	70	106	108	[3]	106	106	[6]
CDC Abound	78	110	112	[6]	67	103	115	[6]	107	114	[12]
CDC Alsask	80	110	104	[6]	67	100	107	[6]	105	105	[12]
CDC Go	74	103	103	[6]	68	104	110	[6]	103	107	[12]
CDC Osler	75	103	102	[6]	66	100	104	[6]	102	103	[12]
CDC Plentiful	78	109	105	[3]	70	106	108	[3]	108	106	[6]
CDC Stanley	73	101	102	[6]	66	101	107	[6]	101	105	[12]
CDC Thrive	76	106	99	[6]	65	99	109	[6]	103	104	[12]
CDC Titanium	73	101	98	[2]	69	105	101	[2]	103	99	[4]
CDC Utmost	75	105	103	[6]	65	99	108	[6]	102	106	[12]
CDC Whitewood **	73	101	100	[2]	66	101	98	[2]	101	99	[4]
Coleman	67	93	94	[2]	60	90	92	[2]	91	93	[4]
HW363 *, ** Δ	85	116	116	[1]	63	94	94	[1]	105	105	[2]
Infinity	79	110	106	[6]	69	104	112	[6]	107	109	[12]
Katepwa	74	100	100	[6]	67	100	100	[6]	100	100	[12]
PT245 * Δ	79	107	107	[1]	70	105	105	[1]	106	106	[2]
PT637 * Δ	72	99	99	[1]	64	97	97	[1]	98	98	[2]
PT769 * Δ	70	95	95	[1]	66	98	98	[1]	97	97	[2]
Shaw	72	101	103	[6]	64	97	109	[6]	99	106	[12]
Stettler	73	103	111	[5]	68	105	116	[5]	104	114	[10]
Superb	77	110	112	[6]	67	104	121	[6]	107	116	[12]
Thorsby	70	96	97	[2]	70	104	102	[2]	100	100	[4]
Unity	79	112	108	[6]	65	99	111	[6]	106	109	[12]

* first year tested, very limited data available

Δ denotes materials not registered

** CWHWS Canadian Western Hard White Spring Wheat

BW487 and BW961 are GP (general purpose) wheat

*** semi-dwarf type

AAC Bailey is a (solid-stemmed) Wheat Stem Sawfly resistant variety

CDC Thrive, CDC Abound, 5605HR CL and 5604HR CL are Clearfield® tolerant varieties

CDC Titanium, CDC Utmost, Shaw, and Unity are Varietal Blends and thus Wheat Midge Resistant varieties

Data above is composed of two trials per site. Coefficient of Variance (CV) values in 2014 for original raw yield data is: DC = 6.83%, 9.09%; FSJ = 9.39%, 4.76%.

Katepwa check variety

CWRS Wheat

Variety Descriptions

Variety	B.C. Peace Averages				Alberta Agdex 100/32								Distributor
	2009 - 2014				Resistance to:								
	Days to Maturity +/- check	Height cm	Bushel Weight lbs/bu	Kernel Protein % +/- check	Lodging	Sprouting	Loose Smut	Common Bunt	Stripe Rust	Leaf Spot	FHB		
■ 5604HR CL	-5.0	84	65	0 [12]	G	G	P	F	XX	P	F	Crop Production Services	
■ 5605HR CL	2.0	97	66	0 [4]	G	XX	VG	G	F	P	G	Crop Production Services	
■ AAC Bailey	-1.5	92	65	0 [8]	G	G	P	F	F	F	F	Canterra Seeds	
■ AAC Brandon	1.4	78	65	0 [6]	G	P	G	VP	G	F	G	SeCan	
■ AAC Elie	1.6	78	65	0 [6]	G	F	F	F	G	F	F	Alliance Seed Corporation	
■ AAC Iceberg **	1.6	86	66	-1 [4]	G	P	P	F	G	P	F	Alliance Seed Corporation	
AAC Prevail *	1.0	90	65	-1 [2]								AAFC: Lacombe	
■ AAC Redwater	-2.9	85	65	1 [6]	G	VG	P	F	G	P	F	SeCan	
AAC W1876 *	5.8	80	65	0 [2]								AAFC: Lacombe	
■ AC Barrie	-0.1	85	65	1 [12]	G	G	G	F	VP	P	F	SeCan	
BW479 * Δ	5.3	91	65	2 [2]								Syngenta	
BW487 * Δ	3.3	83	68	-1 [2]								AAFC: Morden	
BW961 *, *** Δ	4.3	76	65	0 [2]								AAFC: Lacombe	
■ Cardale	-0.4	80	64	0 [6]	G	G	F	VP	G	P	G	Seed Depot	
■ CDC Abound	0.8	78	65	0 [12]	G	F	F	F	P	P	VP	Crop Production Services	
■ CDC Alsask	-0.7	87	63	0 [12]	F	G	G	G	F	VP	P	Crop Production Services	
CDC Go	-1.5	77	64	0 [12]	G	VP	P	F	G	VP	P	public variety	
CDC Osler	-2.1	82	64	0 [12]	G	F	G	G	F	F	VP	public variety	
■ CDC Plentiful	-0.8	86	65	0 [6]	VG	P	VG	F	G	F	G	FP Genetics	
■ CDC Stanley	-1.2	82	64	0 [12]	G	G	G	VP	F	F	P	Crop Production Services	
■ CDC Thrive	-1.8	84	64	0 [12]	G	P	G	F	F	F	P	SeCan	
CDC Titanium	-1.0	92	66	1 [4]	G	P	G	F	VG	P	G	Crop Production Services	
■ CDC Utmost	-0.2	84	64	0 [12]	G	G	P	VP	F	F	P	FP Genetics	
■ CDC Whitewood **	0.4	85	65	-1 [4]	G	G	VP	VP	F	P	F	U of S	
Coleman	-0.4	97	66	0 [4]	F	P	VP	VP	G	F	G	SeCan	
HW363 *, ** Δ	0.3	77	65	0 [2]								AAFC: Lacombe	
■ Infinity	0.0	84	64	0 [12]	G	G	G	G	P	P	VP	Canterra Seeds	
Katepwa	0.0	89	64	0 [12]	F	F	G	G	P	P	F	SeCan	
■ PT245 * Δ	2.3	76	64	0 [2]								AAFC: Lacombe	
PT637 * Δ	2.5	91	66	1 [2]								Syngenta	
PT769 * Δ	-1.4	88	64	0 [2]								U of A	
■ Shaw	-0.9	87	65	1 [12]	G	G	VP	G	F	P	P	SeCan	
■ Stettler	0.9	80	65	1 [10]	G	G	VG	F	F	VP	P	AAFC: Lacombe	
■ Superb	1.0	82	65	0 [12]	G	F	F	G	VP	VP	P	SeCan	
■ Thorsby	1.1	93	65	0 [4]	G	F	F	VP	VG	P	F	U of A	
■ Unity	0.1	86	65	0 [12]	G	G	P	VG	P	P	P	Crop Production Services	

* first year tested, very limited data available

** CWHWS = Canadian Western Hard White Spring Wheat

*** semi-dwarf type

BW487 and BW961 are GP (general purpose) wheat

CDC Thrive, CDC Abound, 5605HR CL and 5604HR CL are Clearfield® tolerant varieties

CDC Titanium, CDC Utmost, Shaw, and Unity are Wheat Midge Resistant varieties

AAC Bailey is a (solid-stemmed) Wheat Stem Sawfly resistant variety

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VG = very good, G = good, F = fair, P = Poor, VP = very poor

XX = insufficient data

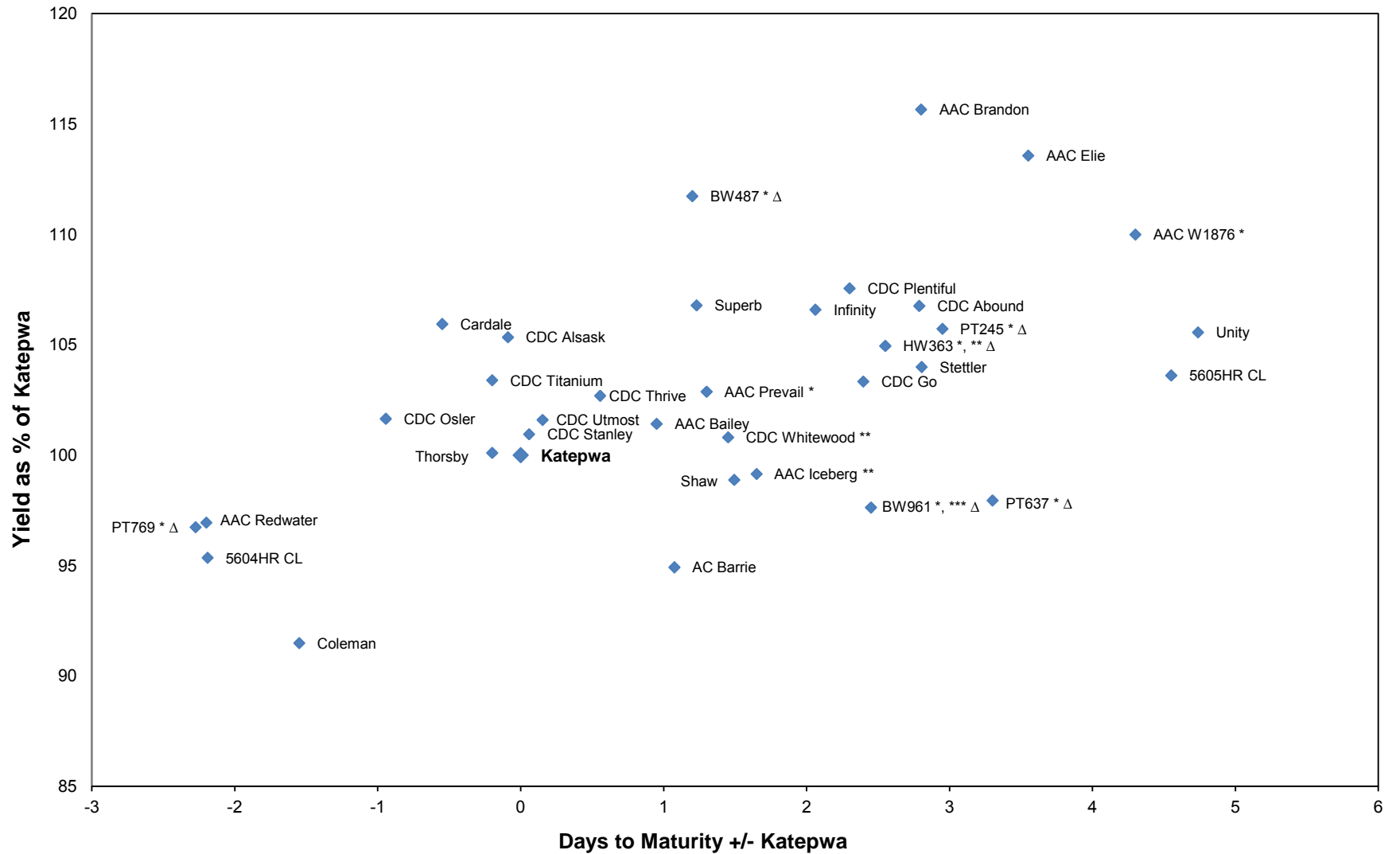
Δ denotes materials not registered

FHB = Fusarium Head Blight

Average protein for **Katepwa** is 13.6%

Overall average maturity for **Katepwa** is 105 days

Katepwa check variety



Note: Graph above does not include outliers (very low yield, very long maturity). Page 7 & 8 has all data.

Average maturity for **Katepwa** is **97 days** for **2014**

AAC Bailey is a (solid-stemmed) Wheat Stem Sawfly resistant variety

CDC Thrive, **CDC Abound**, **5605HR CL** and **5604HR CL** are Clearfield® tolerant varieties

CDC Titanium, **CDC Utmost**, **Shaw**, and **Unity** are Varietal Blends and thus Wheat Midge Resistant varieties

BW487 and **BW961** are GP (general purpose) wheat

Katepwa - check variety

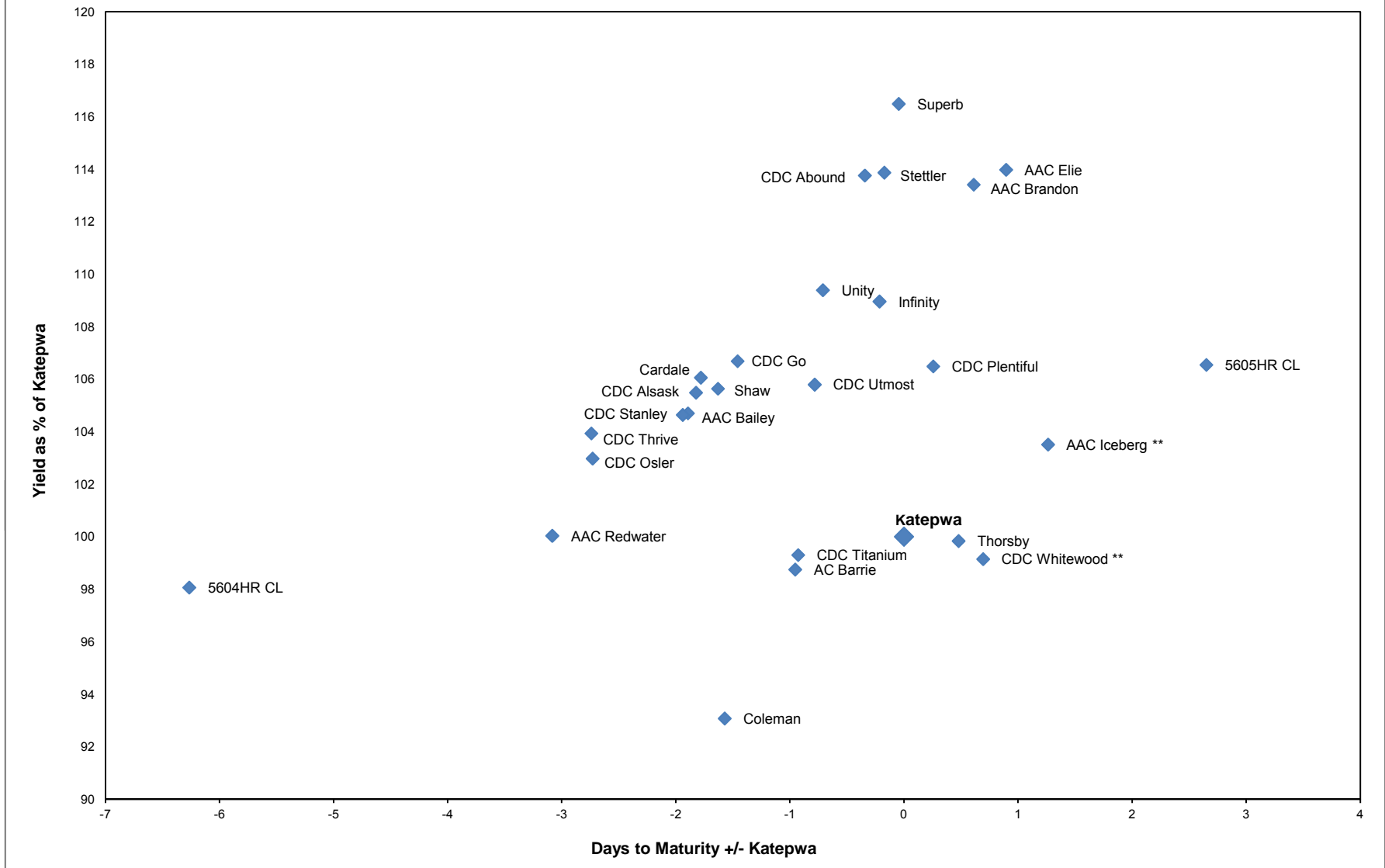
* first year tested, very limited data available

** CWHWS Canadian Western Hard White Spring Wheat

*** semi-dwarf type

Δ denotes materials not registered

CWRS Wheat Regional Variety Performance 2009-2014



Katepwa - check variety

Average maturity for **Katepwa** is **105 days** for **2014**

Δ denotes materials not registered

* first year tested, very limited data available

** CWHWS Canadian Western Hard White Spring Wheat

*** semi-dwarf type

CDC Thrive, CDC Abound, 5605HR CL and 5604HR CL are Clearfield® tolerant varieties
CDC Titanium, CDC Utmost, Shaw, and Unity are Varietal Blends and thus Wheat Midge Resistant varieties
AAC Bailey is a (solid-stemmed) Wheat Stem Sawfly resistant variety

CANADA PRAIRIE SPRING WHEAT

CANADA WESTERN SOFT WHITE SPRING WHEAT

All current Canada General Purpose Spring varieties (CPS and CWSWS) are in this class) should be treated with a systemic fungicide seed treatment to control smut. Avoid deep seeding General Purpose wheats. Note the long maturity periods required for the production of currently available CWSWS wheat varieties. Very late lines, such as *Pasteur*, should not even be attempted in the Peace River region. Seeding rates for all classes of wheat covered by the new class "General Purpose" should be increased 20 to 25% due to the larger kernel size.

CPS / CWSWS Wheat		Yield as % of AC Andrew										
Variety	Type	Dawson Creek				Fort St. John				B.C. Peace		
		2014 Yield		2009 - 2014		2014 Yield		2009 - 2014		2014	2009-2014	
		bu / acre	% of check	Avg. (%)	Stn. Yrs.	bu / acre	% of check	Avg. (%)	Stn. Yrs.	Avg. (%)	Avg. (%)	Stn. Yrs.
5700 PR	CPS-red	101	98	94	[5]	65	93	92	[6]	96	93	[11]
5702 PR	CPS-red	108	103	94	[5]	68	97	95	[6]	100	95	[11]
AAC Chiffon	CWSWS	114	112	107	[2]	83	117	112	[2]	115	110	[4]
AAC Crusader *	CPS-red	97	93	93	[1]	63	86	86	[1]	90	90	[2]
AAC Foray *	CWGP	96	93	93	[1]	67	94	94	[1]	94	94	[2]
AAC Innova *	CWGP	106	100	100	[1]	82	109	109	[1]	105	105	[2]
AAC NRG097 *	CWGP	97	96	96	[1]	69	100	100	[1]	98	98	[2]
AAC Penhold *	CWGP	96	95	95	[1]	62	89	89	[1]	92	92	[2]
AAC Proclaim	CWSWS	94	92	92	[2]	66	92	93	[2]	92	93	[4]
AAC Ryley	CPS-red	98	94	92	[2]	62	87	90	[2]	91	91	[4]
AAC Tenacious *	CPS	86	84	84	[1]	55	78	78	[1]	81	81	[2]
AC Andrew	CWSWS	103	100	100	[5]	71	100	100	[6]	100	100	[11]
AC Barrie	CWRS	77	75	78	[3]	55	78	79	[3]	77	79	[6]
AC Foremost *	CPS-red	102	99	99	[1]	63	88	88	[1]	94	94	[2]
CDC NRG003	CWGP	107	102	94	[4]	66	91	89	[5]	97	92	[9]
Conquer	CPS-red	91	87	89	[4]	68	93	87	[5]	90	88	[9]
Enchant	CPS-red	87	84	85	[2]	55	77	83	[3]	81	84	[5]
Minnedosa	CPS-white	93	88	88	[4]	62	87	87	[5]	88	88	[9]
NRG010	CPS-white	109	105	97	[4]	68	94	92	[5]	100	95	[9]
Pasteur	CWGP	98	96	98	[2]	72	102	103	[3]	99	101	[5]
Superb	CWRS	90	90	88	[5]	68	96	92	[6]	93	90	[11]
SY087 *	CWGP	87	86	86	[1]	60	85	85	[1]	86	86	[2]
SY985	CPS-red	88	85	80	[2]	62	87	85	[3]	86	83	[5]
SY995 *	CPS-red	86	83	83	[1]	60	82	82	[1]	83	83	[2]

* first year tested, very limited data available

Enchant and Conquer are Wheat Midge tolerant Varietal Blend

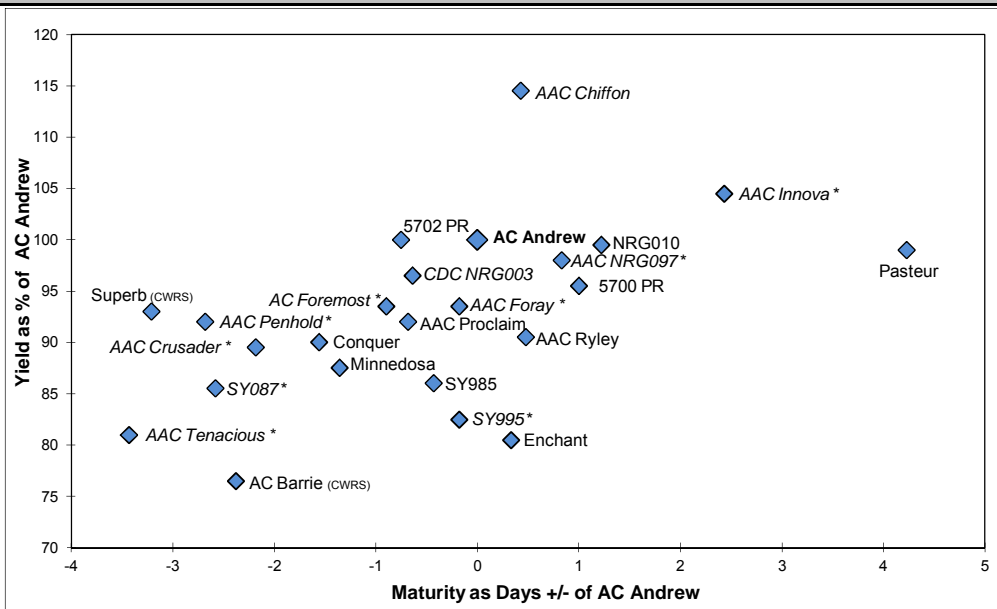
AC Andrew - check variety

Δ denotes materials not registered

Data above is composed of two trials per site. Coefficient of Variance (CV)

values in 2014 for original raw yield data is: DC = 4.61%, 3.87%; FSJ = 5.71%, 6.18%.

CPS / CWSWS Wheat Regional Variety Performance 2014



Δ denotes materials not registered

Average maturity for AC Andrew is 98 days for 2014

CPS / CWSWS Wheat

Variety Descriptions

Variety	Type	B.C. Peace Averages 2009-2014				Alberta Agdex 100/32								Distributor
		Maturity in days +/- check	Height cm	Bushel Weight lbs/bu	Kernel Protein % +/- check	Resistance to:								
						Lodging	Sprouting	Loose Smut	Common Bunt	Stripe Rust	Leaf Spot	FHB		
■ 5700 PR	CPS-red	0.1	75	64	1 [11]	VG	F	P	VG	P	P	P	Crop Production Services	
■ 5702 PR	CPS-red	-0.6	81	63	1 [11]	G	P	P	F	P	F	P	Crop Production Services	
■ AAC Chiffon	CWSWS	0.9	103	64	0 [4]	G	P	VP	VP	G	F	VP	AAFC Lacombe	
■ AAC Crusader *	CPS-red	-2.2	75	63	2 [2]								AAFC Lacombe	
■ AAC Foray *	CWGP	-0.2	83	64	2 [2]	G	G	P	F	G	P	F	AAFC Winnipeg	
■ AAC Innova *	CWGP	2.4	82	62	0 [2]								AAFC Lacombe	
■ AAC NRG097 *	CWGP	0.8	76	65	0 [2]	G	F	F	VG	VP	F	F	AAFC Lacombe	
■ AAC Penhold *	CWGP	-2.7	67	65	2 [2]	VG	G	F	VG	G	F	G	AAFC Lacombe	
■ AAC Proclaim	CWSWS	-0.5	95	64	1 [4]	F	G	G	VP	P	F	G	FP Genetics	
■ AAC Ryley	CPS-red	-0.4	85	63	2 [4]	G	G	F	VG	VP	P	P	SeCan	
■ AAC Tenacious *	CPS	-3.4	87	64	2 [2]								AAFC Lacombe	
■ AC Andrew	CWSWS	0.0	78	64	0 [11]	VG	P	VP	VP	F	P	F	SeCan	
■ AC Barrie	CWRS	-3.1	82	64	3 [6]	G	G	G	F	VP	P	F	SeCan	
■ AC Foremost *	CPS-red	-0.9	68	63	2 [2]	VG	F	F	VG	VP	P	VP	SeCan	
■ CDC NRG003	CWGP	-2.7	84	63	1 [9]	G	F	F	VG	VP	F	F	Canterra Seeds	
■ Conquer	CPS-red	-0.2	91	64	2 [9]	G	P	P	VG	G	F	P	Canterra Seeds	
■ Enchant	CPS-red	0.1	93	64	2 [5]	F	G	P	VG	XX	P	VP	FP Genetics	
■ Minnedosa	CPS-white	-3.2	87	63	1 [9]	G	G	F	G	G	P	P	SeCan	
■ NRG010	CPS-white	1.4	89	63	1 [9]	G	P	P	VG	VG	F	P	Canterra Seeds	
■ Pasteur	CWGP	3.7	81	65	1 [5]	VG	G	P	VP	G	F	F	SeCan	
■ Superb	CWRS	-2.8	83	65	2 [11]	G	F	F	G	VP	VP	P	SeCan	
■ SY087 *	CWGP	-2.6	80	65	3 [2]	G	F	P	G	G	F	G	Syngenta Canada Inc.	
■ SY985	CPS-red	-1.2	86	65	2 [5]	G	P	VG	G	XX	F	F	Crop Production Services	
■ SY995 *	CPS-red	-0.2	77	63	2 [2]	G	P	VP	G	G	P	P	Syngenta Canada Inc.	

* first year tested, very limited data available

VG = very good, G = good, F = fair, P = Poor, VP = very poor

AC Andrew - check variety

XX = insufficient data

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Overall average maturity for **AC Andrew** is **107** days.

Δ denotes materials not registered

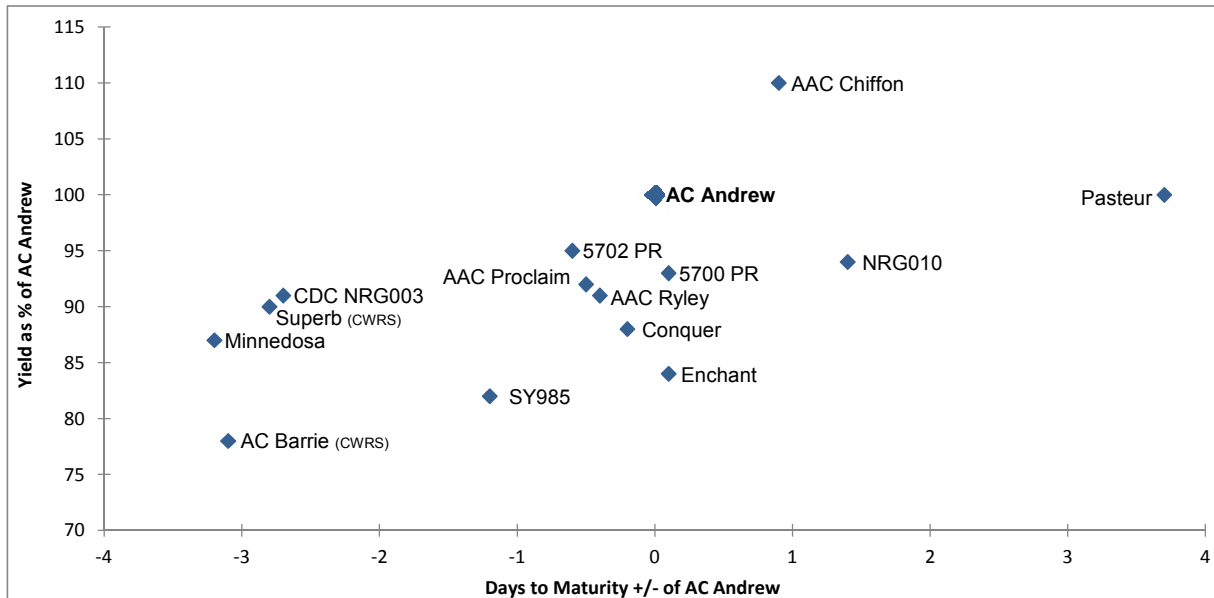
Overall average protein for **AC Andrew** is **10.9** %

Numbers in square brackets [] is number of station years collected for protein

CPS / CWSWS Wheat

Regional Variety Performance

2009-2014



DURUM WHEAT

Durum is a type of wheat which is used to make pasta products (macaroni, spaghetti, etc.), and Canada has become a world leader in quality durum. Durum plant breeding within Canada is also moving toward even higher protein content and is developing a brand new category of high gluten strength durum for a specialty pasta market. However, durum requires a long growing season and high heat, two things the Peace River region has not traditionally been known for having. In the past, durum production has been concentrated in the southern parts of the Canadian prairies.

A few producers in northwestern Alberta have had success growing the crop and for this reason it has been tested in the B.C. Peace since 2009. Often surprises arise in our northern long-daylight region so it was worth investigating durum. Most currently available durum varieties are referenced within literature to be approximately 10 days later in maturity than CWRS wheat. This has not proven to be the case in the B.C. Peace except in 2011, which was a very wet & late year, however it does suggest there is a potential to be late maturing, but no worse than mid-maturity GP wheat. Therefore, durum should not be grown in large acres within the B.C. Peace River region for grain production until more is understood about its agronomics. Interest among grain buyers needs to develop as well which admittedly creates a vicious circle of acceptance by buyer and producer. Caution should be taken when attempting to grow durum in the B.C. Peace region, and *disclosure of this data is currently not a recommendation to grow durum in the Peace.*

It appears that the B.C. Peace River region has one really big advantage in growing durum, as traditionally we do not have to be concerned about Fusarium Headblight, specifically *Fusarium graminearum*. This disease is a major problem in most durum growing regions. 2013 proved to produce some evidence of fusarium species in some wheat due to an exceptionally wet and consistently wet year. Whether this was a fluke or the new norm is not known, but would be a concern for the growing of durum wheat anywhere. For interest sake then, durum data collected within the B.C. Peace region has been disclosed as it appears that durum could hold some economic promise to our region in years to come - assuming a local market develops. The test years 2009 and 2010 unfortunately were years of severe drought and poor yield potentials, but compared to other wheat yields over the same period of time at the same testing locations, durum was respectable in yield by comparison and even seemed to survive the drought better than other wheat types. 2011 and 2013 were very wet & late maturing years but did not change the crop's promising outlook as a new viable crop-type for our region. Noting however that if a normal killing frost would have occurred in either year it would have been bad news for anything later than a CWRS wheat.

Durum Wheat		Yield as % of Strongfield										
Variety	Type	Dawson Creek				Fort St. John				B.C. Peace		
		2014 Yield		2009 - 2014		2014 Yield		2009 - 2014		2014	2009 - 2014	
		bu / acre	% of check	Avg. (%)	Stn. Yrs.	bu / acre	% of check	Avg. (%)	Stn. Yrs.	Avg. (%)	Avg. (%)	Stn. Yrs.
AAC Cabri *	CWAD	72	101	101	[1]	33	102	102	[1]	102	102	[2]
AAC Current *	CWAD	69	96	96	[1]	36	114	114	[1]	105	105	[2]
AAC Marchwell	CWAD	72	98	96	[2]	35	108	107	[2]	103	101	[4]
AAC Raymore	CWAD	64	88	87	[2]	30	96	94	[2]	92	91	[4]
AAC Spitfire *	CWAD	73	97	97	[1]	41	130	130	[1]	114	114	[2]
CDC Carbide *	CWAD	75	104	103	[1]	36	117	117	[1]	111	110	[2]
CDC Desire	CWAD	68	94	97	[2]	37	118	111	[2]	106	104	[4]
CDC Fortitude	CWAD	68	94	98	[2]	38	121	115	[2]	108	106	[4]
CDC Vivid	CWAD	69	94	99	[3]	36	114	103	[3]	104	101	[6]
DT575 * Δ	CWAD	76	105	104	[2]	36	113	113	[2]	109	109	[4]
Enterprise	CWAD	80	112	108	[6]	34	110	104	[6]	111	106	[12]
Strongfield	CWAD	73	100	100	[6]	31	100	100	[6]	100	100	[12]

Strongfield - check variety

AAC Marchwell is a wheat midge tolerant variety

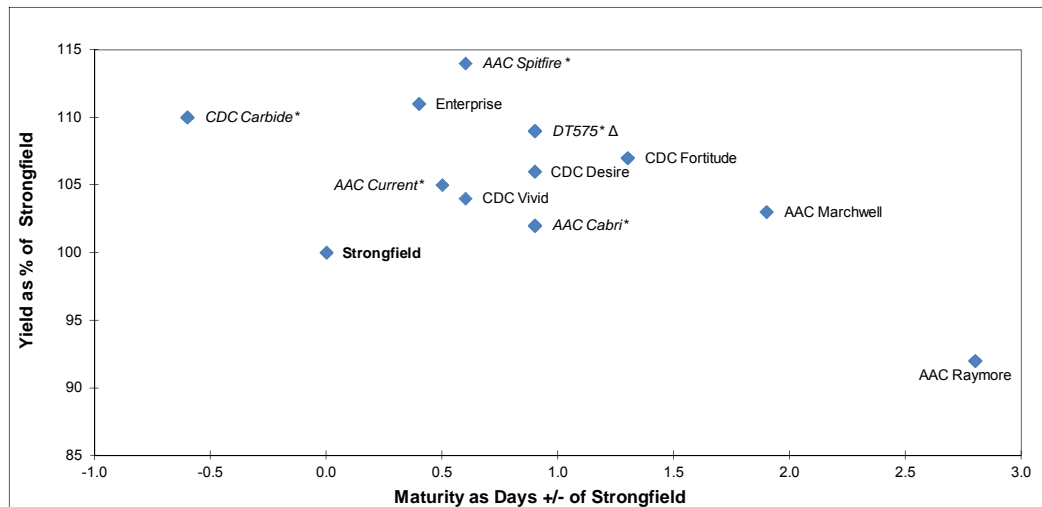
AAC Raymore and CDC Fortitude are stem sawfly (solid stem) resistance varieties

Data above is composed of two trials per site. Coefficient of Variance (CV)

values in 2014 for original raw yield were: DC = 3.45%, 8.74%; FSJ = 4.75%, 8.92%.

Δ denotes materials not registered
* first year tested, very limited data available

Durum Wheat Regional Variety Performance 2014



Average maturity for Strongfield is 100 days for 2014

Durum Wheat		Variety Descriptions												
Variety	Type	B.C. Peace Averages 2009 - 2014				Alberta Agdex 100/32								Distributor
		Maturity in days	Height cm	Bushel Weight lbs/bu	Kernel Protein %	Resistance to:								
		+/- check			+/- check	Lodging	Sprouting	Loose Smut	Common Bunt	Stripe Rust	Leaf Spot	FHB		
AAC Cabri *	CWAD	0.9	83	63	0 [2]									AAFC Lacombe
■ AAC Current *	CWAD	0.5	80	64	0 [2]	F	F	P	G	G	F	P		Alliance Seed Corp.
■ AAC Marchwell	CWAD	1.4	89	63	0 [4]	F	F	G	VG	VG	P	P		SeCan
■ AAC Raymore	CWAD	0.8	88	63	1 [4]	F	F	P	G	G	F	VP		SeCan
AAC Spitfire *	CWAD	0.6	78	62	0 [2]									SeCan
■ CDC Carbide *	CWAD	-0.7	79	64	0 [2]									CPS Canada Inc.
■ CDC Desire	CWAD	0.2	87	64	0 [4]	F	G	P	VG	G	F	VP		Syngenta
■ CDC Fortitude	CWAD	1.2	88	64	0 [4]	G	F	P	VG	VG	P	P		CPS Canada Inc.
■ CDC Vivid	CWAD	1.1	84	63	0 [6]	G	F	F	VG	G	F	VP		Crop Production Serv.
DT575 * Δ	CWAD	0.9	84	63	0 [2]									U of S
■ Enterprise	CWAD	-0.5	81	64	-1 [12]	G	F	P	G	VG	F	P		Canterra Seeds
■ Strongfield	CWAD	0.0	78	64	0 [12]	F	F	VP	F	G	P	VP		SeCan

VG = very good, G = good, F = fair, P = poor, VP = very poor
 XX = insufficient data

* first year tested, very limited data available

Δ denotes materials not registered

Numbers in square brackets [] is number of station years collected for protein

Strongfield - check variety

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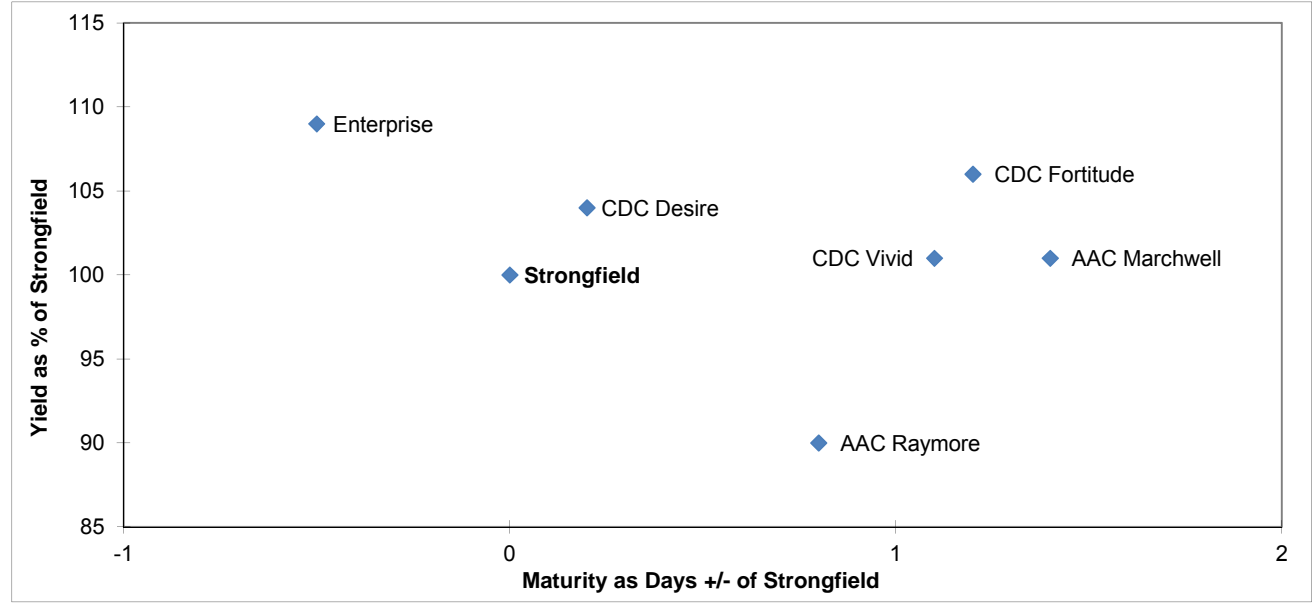
AAC Marchwell is a wheat midge tolerant variety

AAC Raymore, CDC Fortitude are stem sawfly (solid stem) resistance varieties

Overall average maturity for Strongfield is 107 days

Overall average protein for Strongfield is 14.5 %

Durum Wheat Regional Variety Performance 2009-2014



Barley

Six Row Barley		Yield as % of AC Metcalfe										
Variety	Type	Dawson Creek				Fort St. John				B.C. Peace		
		2014 Yield		2009-2014		2014 Yield		2009-2014		2014	2009-2014	
		bus / acre	% of check	Avg. (%)	Stn. Yrs.	bus / acre	% of check	Avg. (%)	Stn. Yrs.	Avg. (%)	Avg. (%)	Stn. Yrs.
AC Lacombe	Feed	96	103	107	[6]	72	102	107	[6]	103	107	[12]
AC Metcalfe	Malt	88	100	100	[12]	103	100	100	[12]	100	100	[24]
Amisk **	Feed	92	94	102	[2]	73	101	107	[2]	98	105	[4]
Breton ***	Feed	96	105	108	[3]	78	111	109	[3]	108	108	[6]
BT596 * Δ	Feed	96	104	104	[1]	75	112	112	[1]	108	108	[2]
CDC Anderson	Malt	83	92	100	[4]	66	95	103	[4]	94	101	[8]
CDC Mayfair	Malt	80	86	98	[6]	64	91	99	[6]	89	98	[12]
Celebration	Malt	83	91	100	[5]	65	91	98	[5]	91	99	[10]
Chigwell	Feed	87	98	103	[4]	67	98	105	[4]	98	104	[8]
Muskwa ***	Feed	87	96	110	[4]	67	99	107	[4]	98	108	[8]
Vivar **	Feed	93	102	110	[6]	65	94	109	[6]	98	110	[12]

Two Row Barley		Yield as % of AC Metcalfe										
Variety	Type	Dawson Creek				Fort St. John				B.C. Peace		
		2014 Yield		2009-2014		2014 Yield		2009-2014		2014	2009-2014	
		bus / acre	% of check	Avg. (%)	Stn. Yrs.	bus / acre	% of check	Avg. (%)	Stn. Yrs.	Avg. (%)	Avg. (%)	Stn. Yrs.
AAC Synergy	Malt	105	115	103	[3]	90	105	101	[3]	110	102	[6]
ABI Voyager Δ	Malt	103	114	102	[2]	87	101	95	[2]	108	99	[4]
AC Metcalfe	Malt	89	100	100	[12]	85	100	100	[12]	100	100	[24]
Bentley	Malt	95	105	102	[6]	91	106	101	[6]	106	101	[12]
Brahma	Feed	105	119	108	[2]	85	99	99	[2]	109	104	[4]
Canmore	Feed	99	113	103	[2]	96	113	107	[2]	113	105	[4]
CDC Kindersley	Malt	91	104	99	[4]	91	109	101	[4]	107	100	[8]
Cerveza	Malt	103	114	107	[5]	97	113	105	[5]	114	106	[10]
Champion	Feed	108	120	124	[6]	94	110	107	[6]	115	115	[12]
HB623 * ¶	Food	73	94	94	[1]	63	87	87	[1]	90	90	[2]
Major	Malt	105	117	101	[6]	92	107	101	[6]	112	101	[12]
Merit 57	Malt	110	123	116	[5]	100	117	109	[5]	120	113	[10]
TR07921 * Δ	Malt	100	110	110	[1]	89	103	103	[1]	106	106	[2]
TR10214	Malt	111	123	108	[2]	93	109	101	[2]	116	105	[4]
TR11127 * Δ	Malt	87	95	95	[1]	77	93	93	[1]	94	94	[2]
TR12733 * Δ	Feed	105	115	115	[1]	92	107	106	[1]	111	111	[2]
TR12735 * Δ	Feed	113	130	129	[1]	95	113	113	[1]	122	121	[2]
Xena	Feed	104	115	109	[6]	83	97	100	[6]	106	104	[12]

Data above is composed of two trials per site. Coefficient of Variance (CV) values in 2014 for original raw yield data is: 2-row barley DC = 4.8%, 3.9%; FSJ = 3.99%, 6.02%; 6-row barley DC = 6.45%, 3.03%; FSJ = 5.53%, 6.27%.

* first year tested, very limited data available

** semi-dwarf type

*** smooth-awned type

¶ denotes hulless seed types (bu/ac adjusted for hulless)

Δ denotes materials not registered, very limited data available

AC Metcalfe - check variety for 2 row

AC Metcalfe - check variety for 6 row

Feed Barley						Variety Descriptions								
Variety	Type	B.C. Peace Averages				Alberta Agdex 100/32 info								Distributor
		2009-2014				Resistance to								
		Days to Maturity	Height	Bushel Weight	Kernel Protein %	Lodging	Loose Smut	False Smut	Root Rot	Scald	FHB			
		+/- check	cm	lbs/bu	+/- check									
Eligible for General Purpose Grades Only														
■ AC Lacombe	6 row	-0.4	84	51	-1 [12]	G	P	G	P	P	VP	SeCan		
■ Brahma	2 row	-0.1	80	55	0 [4]	G	P	VG	G	VP	F	Crop Production Services		
■ Breton ***	6 row	-1.2	85	51	-1 [6]	F	P	G	F	F	VP	Canterra Seeds		
BT596 * Δ	6 row	-1.2	68	54	0 [2]							AAFRD:Lacombe		
■ Canmore	2 row	0.5	85	56	-1 [4]							Canterra Seeds		
■ Champion	2 row	2.4	79	56	-1 [12]	G	VP	VG	XX	VP	F	Crop Production Services		
■ Chigwell	6 row	1.4	80	53	0 [8]							SeCan		
■ Muskwa ***	6 row	0.1	81	53	-1 [8]	G	P	VG	P	G	VP	SeedNet		
TR12733 * Δ	2 row	1.0	74	55	-1 [2]							Crop Production Services		
TR12735 * Δ	2 row	1.0	66	57	-1 [2]							Crop Production Services		
■ Xena	2 row	0.1	78	55	0 [12]	G	P	P	G	VP	G	Crop Production Services		
Semi-dwarf varieties														
■ Amisk **	6 row	0.4	75	50	0 [4]							SeCan		
■ Vivar **	6 row	-0.3	75	53	-1 [12]	VG	F	VG	G	F	VP	SeCan		
Food and general purpose variety, hulless														
■ HB623 * ¶	2 row	-0.3	84	65	0 [2]	VG	VP	F	F	F	F	AAFRD:Lacombe		

Malt Barley						Variety Descriptions								
Variety	Type	B.C. Peace Averages				Alberta Agdex 100/32 info								Distributor
		2009-2014				Resistance to								
		Days to Maturity	Height	Bushel Weight	Kernel Protein %	Lodging	Loose Smut	False Smut	Root Rot	Scald	FHB			
		+/- check	cm	lbs/bu	+/- check									
■ AAC Synergy	2 row	0.5	79	54	-1 [6]	F	VP	F	F	VP	P	Syngenta		
■ ABI Voyager Δ	2 row	0.7	83	55	0 [4]							Busch Agric. Resources Inc.		
■ AC Metcalfe	2 row	0	79	55	0 [24]	F	VG	F	F	VP	F	SeCan		
■ Bentley	2 row	-0.3	81	54	0 [12]	G	P	G	G	VP	P	Canterra Seeds		
■ CDC Anderson	6 row	-0.5	89	53	0 [8]	G	G	VG	F	P	F	SeCan		
■ CDC Kindersley	2 row	-2.5	86	56	0 [8]	G	VP	VG	F	VP	F	SeCan		
■ CDC Mayfair	6 row	-3.0	79	52	0 [12]	G	S	G	F	VP	P	Canterra Seeds		
■ Celebration	6 row	-4.2	85	53	1 [10]	VG	VG	VG	P	VP	P	Canterra Seeds		
■ Cerveza	2 row	-0.9	79	54	0 [10]	F	VG	VG	F	VP	F	Mastin Seeds		
■ Major	2 row	-1.4	76	54	0 [12]	G	VG	G	F	P	F	Crop Production Services		
■ Merit 57	2 row	2.4	82	55	-1 [10]	F	P	VP	F	P	G	Canterra Seeds		
TR07921 * Δ	2 row	0.1	84	55	-1 [2]							U of S		
TR10214	2 row	0.9	86	54	0 [4]							U of S		
TR11127 * Δ	2 row	-0.2	76	56	-1 [2]							SeCan		

VG= very good, G = good, F = fair, P = poor, VP = very poor

¶ denotes hulless seed types

XX = insufficient data

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Overall average maturity for AC Metcalfe is 94 days

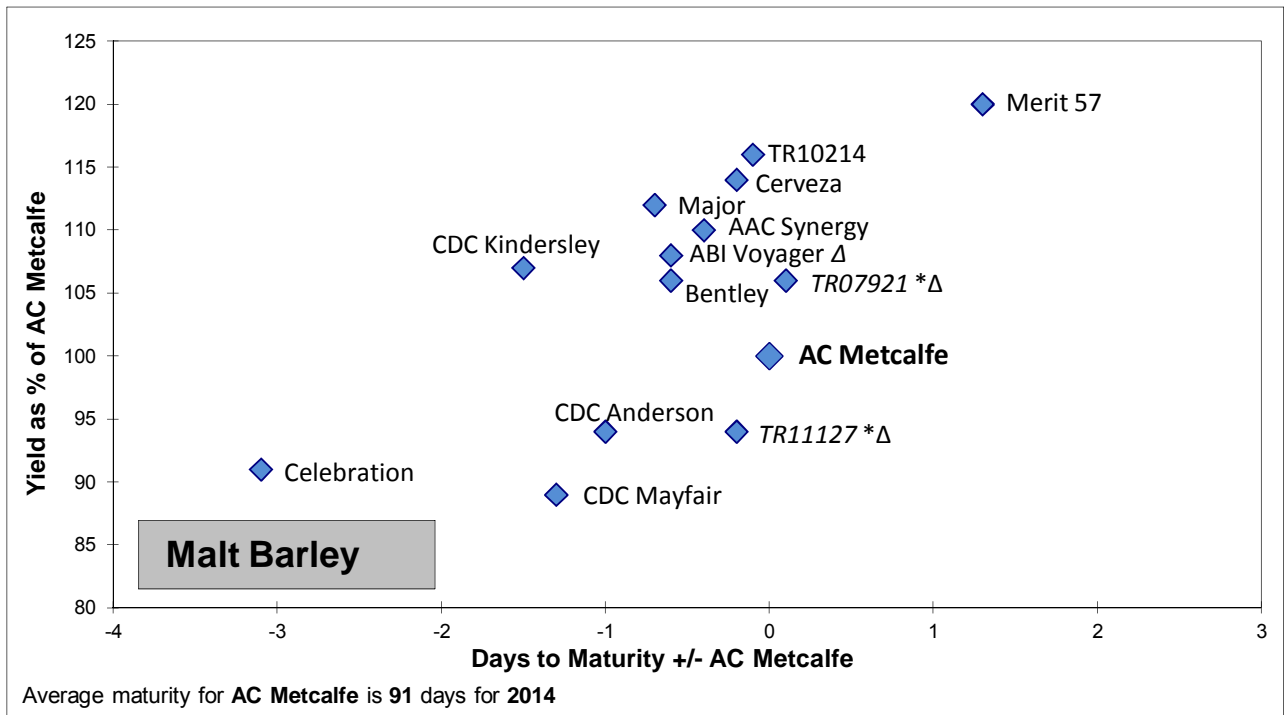
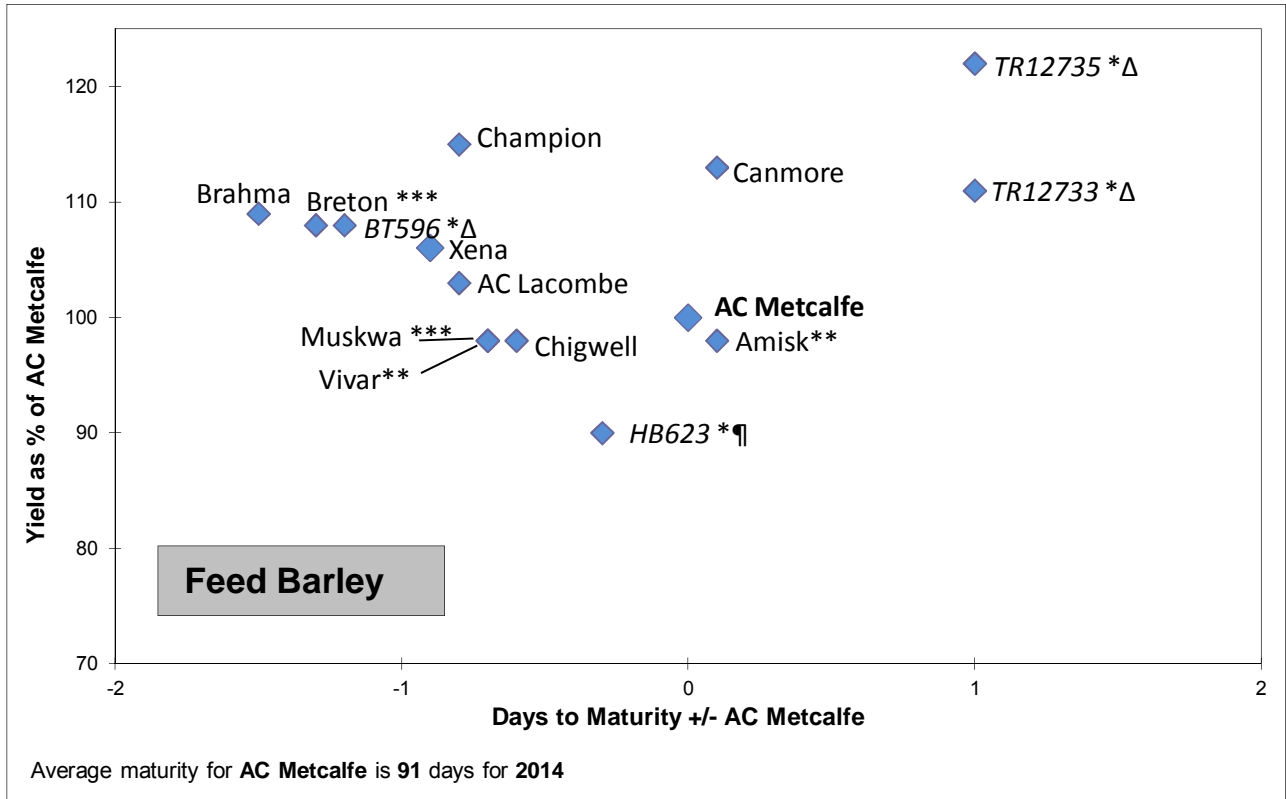
Δ denotes materials not registered

Overall average protein for AC Metcalfe is 13%

Numbers in square brackets [] is number of station years collected for protein

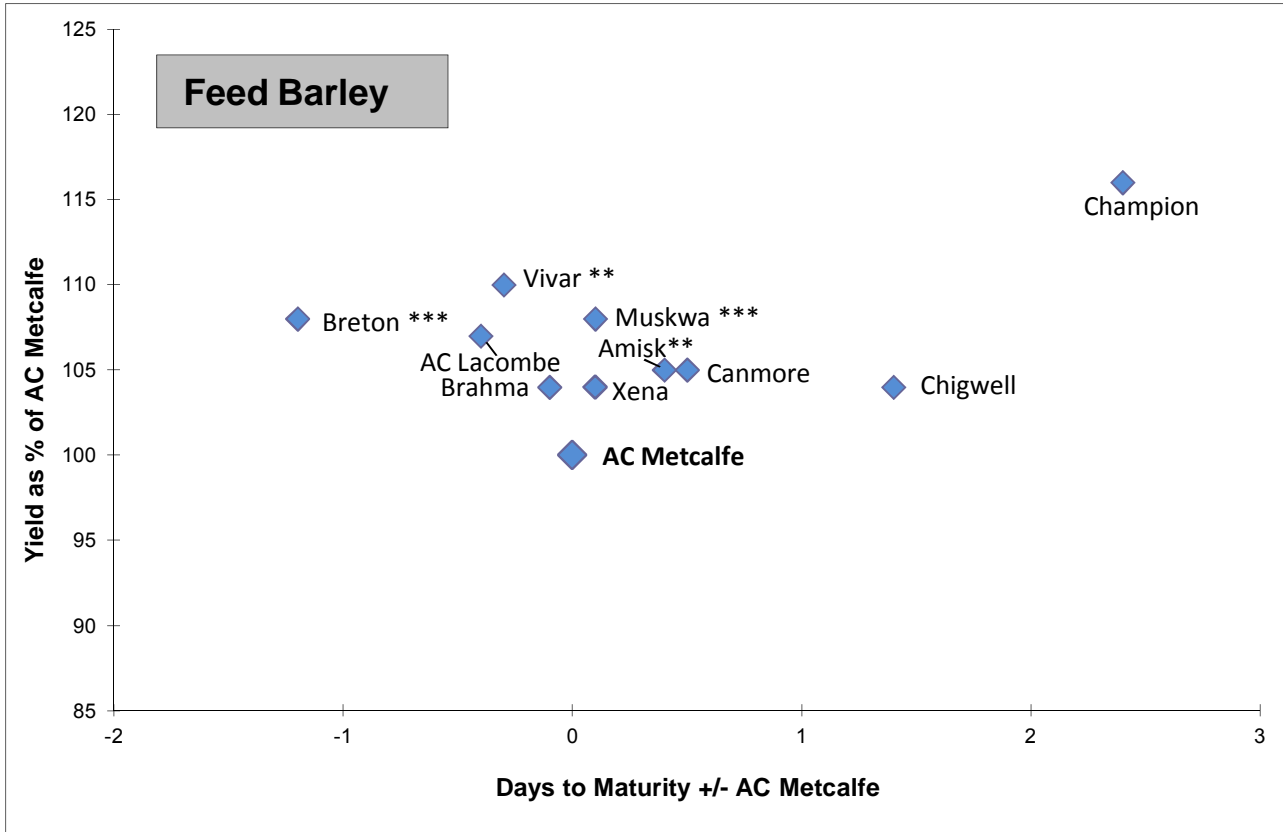
AC Metcalfe - check variety

* first year tested, very limited data available ** semi-dwarf type *** smooth-awned type

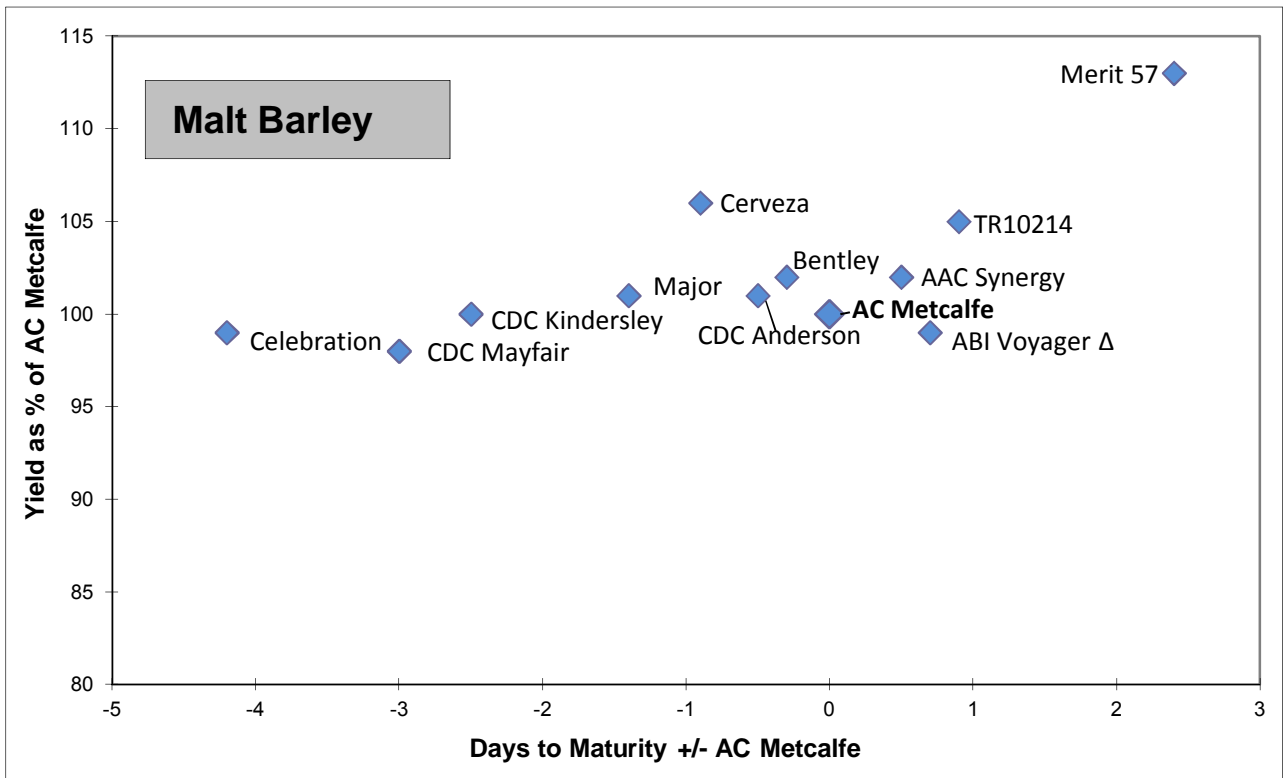


* first year tested materials
 ** semi-dwarf type
 *** smooth-awned type

Δ denotes materials not registered
 ¶ denotes hulless seed types



Overall average maturity for AC Metcalfe is 94 days (both graphs)



** semi-dwarf type
 *** smooth-awned type

Δ denotes materials not registered
 ¶ denotes hulless seed types

OAT

Oat is usually a feed crop but some varieties are also suitable for higher value feed and food markets. The milling industry prefers higher protein varieties with plump kernels and lower hull content, while the horse industry prefers white hulled varieties. Hulless oat varieties have excellent feed and food value but need to be stored drier than normal varieties (<12% moisture) and do not flow as well in the bin due to their pubescence (hairs) which seem to "lock together". The exception to this "hairy-hulless" issue are "low pubescence" varieties like *AC Gehl*, tested in 2011-2013, which are lines aimed at finding a replacement for rice actually, hence its marketing slogan "Prairie Rice"®. A potential contracted market in the Peace River area is a real possibility if agronomics work out for other "hairless hulless" oat lines but in both 2012 and 2013 wet soils expressed poor vigor of the germinating seed due to our cool clay soils. No "hairless hulless" oat lines were tested in 2014. More vigorous "hairless hulless" lines are being sought that can handle our soils and spring conditions. Wet and cool soils during emergence are more the norm in the Peace River region which "hairless hulless" lines do not like as a general observation. Yield values for all hulless oat varieties are expressed after hull removal, which reduces the seed weight by 20-25% compared to the normal hulled oat varieties. Keep this ratio in mind while comparing hulless to hulled when such data is present.

Oat		Yield as % of CDC Dancer										
		Dawson Creek				Fort St. John				B.C. Peace		
		2014 Yield		2009-2014		2014 Yield		2009-2014		2014	2009-2014	
Variety	Colour	bu / acre	% of check	Avg. (%)	Stn. Yrs.	bu / acre	% of check	Avg. (%)	Stn. Yrs.	Avg. (%)	Avg. (%)	Stn. Yrs.
AAC Justice	Yellow	113	103	99	[2]	95	103	110	[2]	103	104	[4]
AC Mustang	White	121	113	108	[6]	102	116	114	[6]	114	111	[12]
<i>Bia</i> *	White	121	105	105	[1]	104	113	113	[1]	109	109	[2]
Cascade	Yellow	117	105	99	[2]	93	102	97	[2]	103	98	[4]
CDC Big Brown	Brown	121	110	99	[5]	97	111	107	[5]	110	103	[10]
CDC Dancer	White	110	100	100	[6]	89	100	100	[6]	100	100	[12]
CDC Haymaker	Yellow	129	108	97	[2]	109	106	109	[2]	107	103	[4]
CDC Ruffian	White	128	115	97	[3]	108	119	104	[3]	117	101	[6]
CDC Seabiscuit	Yellow	130	112	97	[4]	109	110	107	[4]	111	102	[8]
<i>CS Camden</i> *	White	123	108	108	[1]	104	110	110	[1]	109	109	[2]
Lu	Yellow	107	96	95	[6]	93	101	103	[6]	99	99	[12]
<i>Nice</i> *	White	119	105	105	[1]	100	108	108	[1]	106	106	[2]
<i>OT3066</i> * Δ	White	119	104	104	[1]	101	105	105	[1]	104	104	[2]
Souris	Yellow	119	106	96	[3]	89	98	102	[3]	102	99	[6]
Triactor	White	141	120	109	[6]	119	122	114	[6]	121	111	[12]

Data above is composed of two trials per site. Coefficient of Variance (CV) values in 2014 for original raw yield data is: DC = 5.79%, 5.19%; FSJ = 4.68%, 4.61%.

* first year tested, very limited data available

Δ denotes materials not registered

CDC Dancer - check variety



Health Benefits Of Oat

Oat is mainly used for livestock feed especially horses and cows and only a small percentage of oat has been traditionally used for human consumption. However, oat are a great source of fibre which consists of more than half as soluble fibres. Oat is high in protein and mineral contents included calcium, iron, magnesium, zinc, copper, manganese, thiamin, folacin and vitamin E. They are higher in these components than any other whole grain, such as wheat, barley, corn or rice. Rich in Vitamin B1 they can help maintain carbohydrate metabolism. Many scientific researchers have proven that eating oatmeal, oat bran and whole oat products improves both blood pressure and cholesterol levels and furthermore, it also reduces the risk of heart disease, cancer and diabetes. Thus, oat is a significant contributor to the good health of not only livestock but also to good human health as well.

Oat		Variety Descriptions					
Variety	Type	BC Peace Averages 2009 - 2014			Alberta Agdex 100/32 info		Distributor
		Maturity as days +/- check	Height cm	Bushel Weight lbs/bu	Tolerance to:		
					Lodging	Smuts	
■ AAC Justice	Milling	1.9	100	43	G	VG	FP Genetics
■ AC Mustang	Feed/Forage	3.5	97	43	G	F	Mastin Seeds
■ <i>Bia</i> *	Feed	0.2	78	39			SW Seed Ltd.
Cascade	Feed	1.3	80	40			SeCan
■ CDC Big Brown	Milling	3.0	91	43	G	VG	SeCan
■ CDC Dancer	Milling	0.0	91	42	G	VG	FP Genetics
■ CDC Haymaker	Forage	2.3	106	39	F	G	SeCan Association
■ CDC Ruffian	Milling	5.1	85	41	G	VG	FP Genetics
■ CDC Seabiscuit	Milling	6.0	95	41	G	G	Canterra Seeds
■ <i>CS Camden</i> *	Milling	-0.6	72	39			Canterra Seeds
Lu	Feed	-1.8	87	41	G	VG	SeCan
■ <i>Nice</i> *	Milling	-0.7	82	40			La Coop fédérée
<i>OT3066</i> * Δ	Milling	-1.0	81	39			U of S
■ Souris	Milling	1.7	83	41	VG	VG	Seed Depot
■ Triactor	Milling	3.1	87	39	G	VG	Canterra Seeds

CDC Dancer - check variety

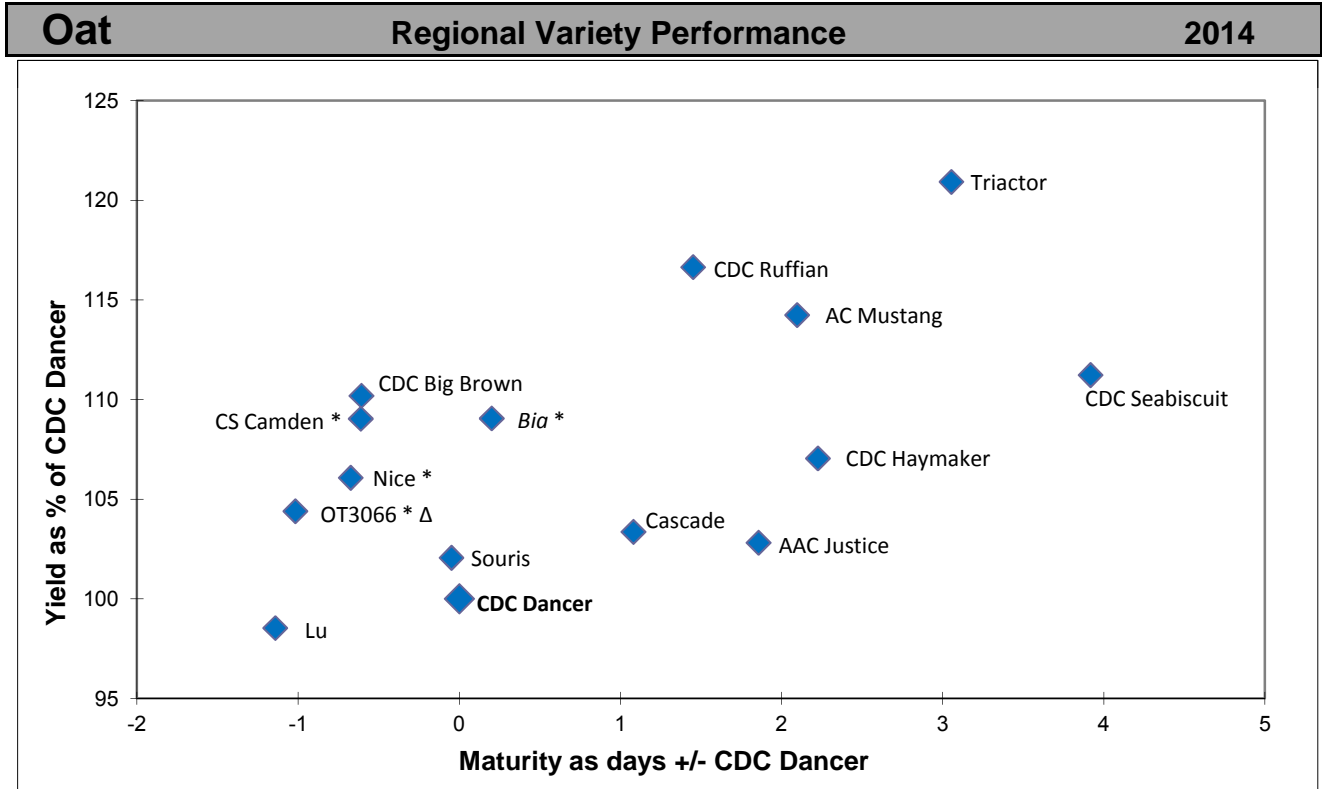
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VG = very good, G = good, F = fair, P = poor, VP = very poor

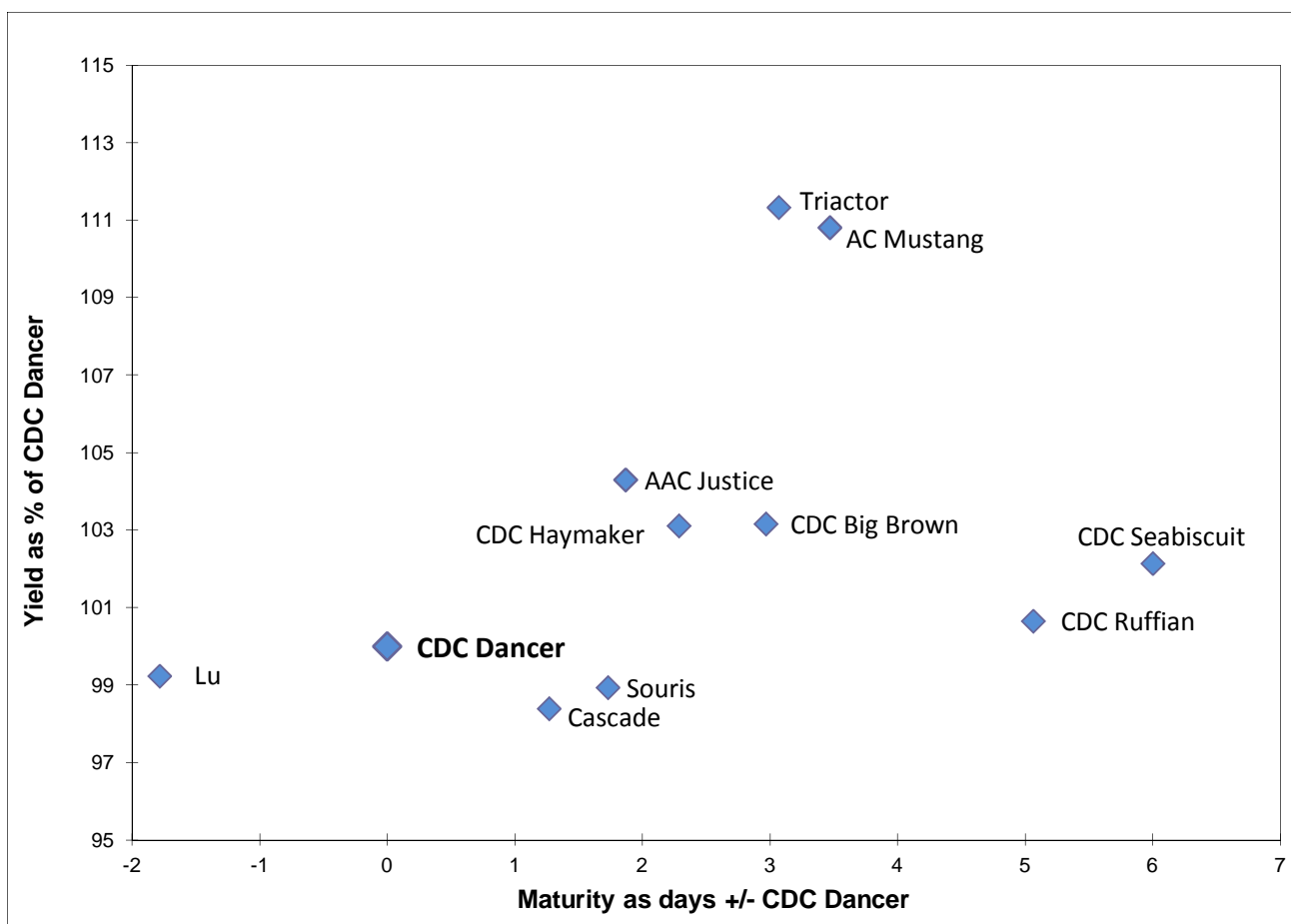
XX = insufficient data

* first year tested, very limited data available

Δ denotes materials not registered



Average maturity for **CDC Dancer** is **86** days in **2014**



Overall average maturity for **CDC Dancer** is **94** days in 2014

Oat for Feed

Oat is often sown to provide fodder in the form of silage or greenfeed. Oat will yield more silage or greenfeed per unit area than any other cereal crop. If managed properly, it can provide 3-4.5 tons of dry matter per acre, or more, of high quality feed containing up to 10 percent protein¹. Many years of comparing yields of oat with barley have shown oat to be superior in the Black and Grey Wooded soil zones¹. Although the percent protein level in barley is higher than in oat, the total amount of protein produced on a given area is higher with oat than with barley¹. Oat has about 22-26 percent hull whereas barley averages about 12-14 per cent hull on a weight basis¹. When choosing a variety, the seed yield as well as the forage yield should be considered, thereby keeping one's options open to harvest as forage or grain¹. We do not currently evaluate oat varieties for forage yield in these tests.

Forage Oat

It is believed by some producers that one variety might be better than another because it appears "leafier"; however, tests on a number of varieties have shown very little variation in leafiness². Having said that however, such work has not likely included the newer lines of forage oat that are entering the market place now. These new "forage only" lines, such as *CDC Baler* and *Murphy*, have usually been much larger plants in our tests than their traditional counterparts developed for seed quality. This should translate to more biomass being made available for forage production. Note however, that traditionally our oat tests do not lodge and so it is unclear as to whether larger plants are going to be a concern for early lodging in a large-scale forage production practice in our area³.

Other Comments

On heavier soils and in the more moist areas, lodging resistance should be considered, but again, traditionally lodging has not been a concern in our B.C. Peace oat trials³. The variation in straw feed quality between oat varieties is insignificant and should not be used as a variety selection criterion³. The average feed values are: protein 4%, fibre 49%, calcium 0.27%, and phosphorus 0.08%⁴.

Source^{1,2,4}: Alberta Agriculture, Food, and Rural Development website www.agric.gov.ab.ca

Source³: Alberta Agdex 100/32

SPRING TRITICALE

Note: no new triticale varieties were available for testing in 2014. Triticale data displayed below is from 2013 summaries.

Triticale is a genetic cross (not a hybrid) developed by crossing wheat (*Triticum turgidum* or *Triticum aestivum*) with rye (*Secale cereale*). Most varieties of spring triticale currently available are approximately 10 days or more later maturing than CWRS wheat, and as such they should not be grown in the B.C. Peace River region for grain production. However, a few varieties are proving to be earlier than traditional spring triticale varieties, and perhaps as breeding continues earlier lines may come along that can be grown here for grain with a consistent and early enough maturity. Their high grain yields are "attention grabbers", so it has been worth watching their development. Triticale seems to hold a lot of potential for ethanol production in the Peace River region if breeding efforts could produce earlier maturing lines. Drought tolerance is the primary advantage that spring triticales have over other spring cereal crops. Spring triticales are also a valuable alternative or compliment to barley and oat as forage feed. Current triticale lines do tend to have low resistance to Ergot, likely due to late maturity, but must be overcome if triticale is to be used for feed. This may become less of a concern as earlier lines are bred. Triticale's potential use as a "high volume ethanol feedstock" to our region, thus offering a new cropping choice, is the reason data is included in this report.

Variety	Yield as % of AC Ultima												
	Dawson Creek				Fort St. John				B.C. Peace				
	2013 Yield		2008-2013		2013 Yield		2008-2013		2013		2008-2013		
	bu / acre	% of check	Avg. (%)	Stn. Yrs.	bu / acre	% of check	Avg. (%)	Stn. Yrs.	Avg. (%)	Avg. (%)	Stn. Yrs.		
AC Ultima	154	c	100	100	[6]	164	c	100	100	[6]	100	100	[12]
Brevis	172	a	112	110	[3]	181	a	110	108	[3]	111	109	[6]
Bumper	159	b	103	105	[5]	173	b	106	104	[5]	104	105	[10]
Sunray	152	c	98	102	[4]	161	c	98	106	[4]	98	104	[8]
Taza	153	c	99	103	[4]	162	c	99	100	[4]	99	102	[8]
LSD (P=.05) =	4.83				6.40								
CV value (%) =	1.99				2.47								

Means followed by the same letter do not significantly differ (P=.05, LSD)

* first year tested, very limited data available

Δ denotes materials not registered

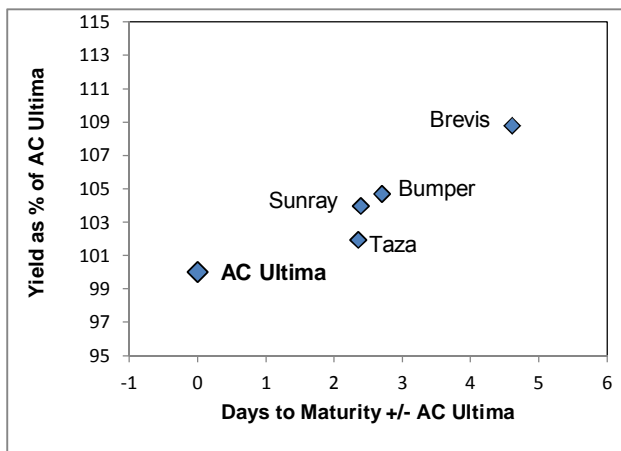
AC Ultima - check variety

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VG= very good, G = good, F = fair, P = poor, VP = very poor, XX = insufficient data

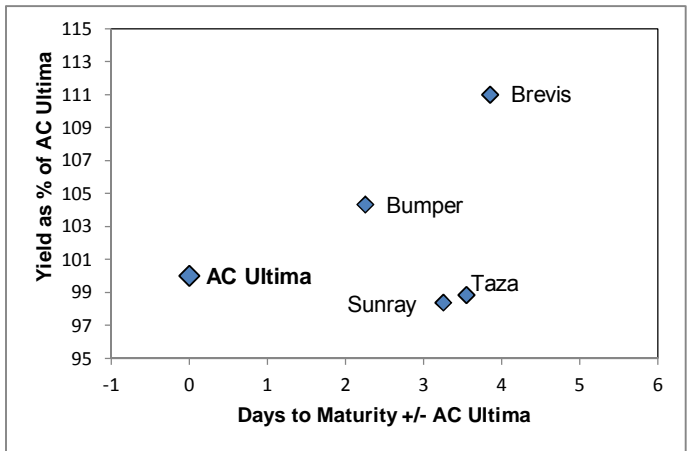
Variety	Variety Descriptions												
	BC Peace Averages 2008-2013				Alberta Agdex 100/32								Distributor
	Maturity as days +/- check	Height (cm)	Bushel Weight (lbs/bus)	TKW (g / 1000)	Resistance to:								
					Lodging	Shatter	Spawning	Stripe Rust	Common Bunt	FHB	Ergot		
AC Ultima	0.0	92	58	44	G	G	F	G	VG	F	P	FP Genetics	
Brevis	4.6	99	61	45	G	G	F	G	VG	P	P	Wagon Wheel Seed Corp.	
■ Bumper	2.7	88	60	45	VG	G	F	G	VG	P	XX	SeCan	
Sunray	2.4	95	58	44	VG	G	F	G	VG	P	G	SeedNet	
■ Taza	2.4	104	58	46	G	G	F	G	VG	VP	F	Solick Seeds	

Regional Variety Performance 2008-2013



Overall average maturity for AC Ultima is 107 days

Regional Variety Performance 2013



Average maturity for AC Ultima is 120 days for 2013