



Varieties of Cereal and Oilseed Crops for Alberta

This publication provides information on cereal and oilseed variety performance within Alberta and northeastern British Columbia. Important agronomic characteristics are given in tabular form for varieties of wheat, oats, barley, rye, triticale, flax and canola.

The Alberta Regional Variety Testing program is coordinated by the Alberta/British Columbia Grain Advisory Committee (ABCGAC) and Alberta Agriculture and Rural Development. Funding for the program is provided by Alberta Agriculture and Rural Development, the Alberta Seed Growers Association, the Alberta Winter Wheat Producers' Commission and entry fees for the varieties in the tests.

Data for this publication are contributed by numerous applied research associations, the British Columbia Grain Producers, the Prairie Grain Development Committee, the Canola Council of Canada, Viterra, Agriculture and Agri-Food Canada as well as Alberta Agriculture and Rural Development. Every year, the test results and updated tables are reviewed and approved by members of the ABCGAC. Sincere thanks are extended to all individuals and organizations who contribute to this important publication.

Test yield categories

The defined range for each Test Yield Category is provided in bu/ac. Variety yields are reported based on the site means relative to the check in two ways:

1. As the overall average yield for all data available to the AB/BC testing program, with the number of site years of data indicated. When there are limited data for a new variety, yield information may only appear in the Overall Yield column.

2. As the average yields in Low, Medium, High and Very High Test Yield Categories for comparison with the check for productivity regimes and environments that may be anticipated. Varieties that are statistically higher (+) or lower (-) yielding than the standard check are indicated. No symbol after the yield figure indicates that there is no statistical difference. Caution is advised when interpreting the data with respect to new varieties that have not been fully tested.

Test Yield Categories allow producers to fine tune their variety choices for the productivity levels expected in particular fields in the coming season. This approach is similar to that used when making decisions on the levels for other inputs. Scientific studies conducted on crop varieties in Western Canada show that Test Yield Category analysis provides a more stable description of variety yield performance than descriptions organized by geographic groupings.

To make effective use of the yield comparison tables, producers first need to assess where their target yield for the season fits within the Low, Medium, High and Very High Test Yield categories. It should be noted that the indicated yield levels are those from small plot trials, which are often 15 to 20 per cent higher than yields expected under commercial production. Also remember that yield is not the only factor that affects net return. Be sure to consider the other important agronomic and disease resistance characteristics. The genetic yield potential of a variety is often masked by various crop management factors, some of which can be controlled.

Cereal and oilseed variety performance tables can help producers plan.

Yield summarization methods

For cereal crops, yield data is expressed on the basis of varying environmental productivity (Test Yield Categories of Low, Medium, High and Very High). Experience has shown that yield rankings can change substantially due to growing conditions. To reflect these differences and make the data more useful to producers, results from a test site that produced high yield in a particular year are now placed into the database for 'high' yielding environments. That same site may contribute to the 'low' yielding category in a drought year, when yields are low.

Consistent performance over all productivity environments indicates that the variety has good yield stability over a wide range of environments. For new varieties where sufficient data is not available to provide reasonable estimates of yield performance in each Yield Test Category, the overall provincial yield is a first indication of the yield potential relative to the check.

It is important to note that some of the comparisons in the tables are not direct comparisons. Small plot agronomic trials are expensive to grow, and new varieties are registered every year. It is simply impractical to grow all the varieties at the same time. Following several years of data collection, the yield data for a particular variety will stabilize relative to the standard check, and testing will no longer be warranted.

It is for this reason that the same standard reference check varieties are grown every year (e.g. AC Barrie for CWRS wheat, AC Metcalfe for barley), and changes do not occur very often. This means that the only direct comparison you can be sure of is with that of the reference check. The "number of station years" column provides some indication of the unbalanced nature of the data.

To help in the selection process, varieties that have yielded statistically higher (+) or lower (-) than the standard check are indicated. In many cases, no symbol is reported, indicating that the yields are not significantly different from the standard check.

If a large difference from the check is reported but is not significant, this could mean that the yields of the new variety have varied widely and/or there are still not enough data to prove a statistical difference. In all cases, for the yield data to be presented, there must be a total of at least six station years of data collected over two years. With additional years of testing, the reported yield differences will become more precise.

Variety choice should not be based solely on yield in a specific Test Yield Category. Producers are encouraged to consider other characteristics, such as maturity, straw strength and disease resistance, when considering a new variety. In addition, factors such as expected growth

season rainfall, soil moisture status, disease forecasts, soil fertility and weed pressure will affect the specific Test Yield Category in which actual yields will occur.

Maturity ratings

As is the case for yield, growing conditions have a tremendous influence on maturity. For example, a variety of CWRS wheat may mature in 98 days in Lethbridge, but take 103 days in Edmonton. In addition, a two-day difference in maturity between varieties in Lethbridge may amount to a five-day difference in Edmonton.

To take this factor into account, maturity is now expressed using a five category scale: Very Early, Early, Medium, Late and Very Late. To aid producers with this relative scale, the average number of days to maturity for the standard check is reported. Note that this scale is different for each crop type. For example, an early barley variety will mature much earlier than an early flax variety.

Plant Breeder's Rights

The use of the Plant Breeder's Rights (PBR) logo ◊ indicates a variety is protected by law, and seed of this variety cannot be sold without permission and royalty payment. The use of the logo ▲ indicates that PBR has been applied for.

Diseases, seed treatment and seed testing

- Disease ratings are compiled from various data sources in Alberta and other prairie provinces.
- Treat rye and flax seed to control seedling blight, cereal seed for smuts and fusarium.
- Treated seed must not be fed to livestock, poultry or wildlife or sold for feed. Refer to labels for maximum storage periods of treated seed.
- The leaf spot rating in the wheat charts is a combination of resistance to tan spot and septoria leaf disease complex.
- Fusarium Head Blight (FHB), caused by *Fusarium graminearum*, is an increasing problem in Alberta. The relative ranking of crops from most susceptible to least susceptible is durum, CPS wheat, CWRS wheat, triticale, barley and oats. Corn is a host of *F. graminearum* and can serve as a source of infection when residue is left on the ground. Under severe epidemics, all cereal varieties will suffer damage. All seed, especially seed brought in from infected areas of the eastern prairies, should be tested for the presence

of FHB and treated with an appropriate seed treatment. Producers are advised to choose varieties with the best FHB tolerance whenever possible and to always use best management practices to slow the spread of this disease.

- All seed of cereal varieties tested in the Alberta Regional Variety Testing program comes with a “fusarium-free” certificate. In addition, all regional trials are inspected for the disease at the most susceptible stage.

Laboratories participating in the FHB testing program:

- 20/20 Seed Labs Ltd., Nisku, AB
1-877-420-2099
- BioVision Seed Research Ltd., Edmonton, AB
1-800-952-5407
- BioVision Seed Research Ltd., Grande Prairie, AB
1-877-532-8889
- Parkland Laboratories, Red Deer, AB
1-403-342-0404
- Precision Seed Testing, Beaverlodge, AB
1-780-354-2259
- Seed Check Technologies Inc., Leduc, AB
1-780-980-8324

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Other variety information

For additional variety information, including varieties not listed in this factsheet, check the Alberta Agriculture website (www.agriculture.alberta.ca), or call the Alberta Ag-Info Centre toll-free at 310-FARM (3276).

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Alberta/British Columbia Grain Advisory Committee

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SPRING WHEAT

Variety	Overall Yield	Overall Station Years of Testing	Yield Category ¹ (% AC Barrie)			Agronomic Characteristics							Disease Resistance ⁵				
			Low <45 (bu/ac)	Med 45 - 70 (bu/ac)	High >70 (bu/ac)	Mat. Rating ³	Prot. %	Te.Wt (lb/bu)	TSW ⁴ (g)	Ht (cm)	Resistance to: ⁵		Loose Smut	Bunt	Stripe Rust	Leaf Spot	FHB
											Lodg.	Sprout					
CANADA WESTERN RED SPRING																	
AC Barrie (bu/ac)	59		36	55	79												
AC Barrie ² ◊	100	(357)	100	100	100	M	13.3	62	37	88	G	G	G	F	VP	P	F
5602HR ◊	105+	(80)	101	104	109+	M	0.5	63	37	91	G	F	VG	G	F	F	G
5603HR ◊	105+	(50)	103	107+	104+	L	-0.3	63	34	87	G	VG	G	G	P	F	F
5604HR CL ◊	100	(49)	106	99	99	M	-0.1	63	33	87	G	G	VG	VG	XX	P	G
AC Cadillac ◊	96-	(103)	96-	96-	96-	M	0.2	64	39	98	F	F	VG	VG	G	F	F
AC Eatonia ◊	94-	(78)	87-	97	92-	M	-0.1	62	35	92	P	G	F	G	F	P	XX
AC Elsa ◊	103+	(110)	99	105	104	M	-0.4	62	35	89	G	F	G	F	F	G	P
AC Intrepid ◊	102	(107)	98	103	105+	E	-0.5	62	39	90	G	P	F	G	G	F	P
AC Splendor	95-	(151)	92-	95-	98	VE	0.4	61	37	89	F	F	F	F	F	F	P
Alikat	96-	(70)	95-	95-	98	E	-0.4	63	36	87	F	F	G	XX	VP	P	F
Alvena ◊	101	(68)	100	101	103	E	0.4	63	37	90	G	P	G	G	F	XX	P
Carberry ◊	107+	(49)	117+	104	105	L	0.2	63	38	79	VG	F	G	G	G	P	G
CDC Abound ◊ CL	110+	(84)	108+	109+	112+	M	0.1	63	40	82	G	F	F	F	P	P	P
CDC Alsask ◊	107+	(102)	105+	107+	109+	M	0.1	62	36	92	F	G	G	G	F	P	P
CDC Bounty	104+	(65)	101	106+	103	M	-0.4	64	37	94	F	F	G	F	G	P	F
CDC Go	111+	(88)	103	111+	117+	M	0.2	61	42	83	G	VP	P	G	G	P	P
CDC Imagine ◊ CL	104+	(76)	102	104	109+	M	-0.2	61	37	83	G	F	G	G	F	P	VP
CDC Kernen ▲	108+	(49)	111	103	110+	M	0.4	63	38	92	G	F	VG	F	F	F	F
CDC Osler	106+	(70)	103	106	109+	E	0.0	61	35	85	G	F	G	G	F	F	VP
CDC Stanley ▲	114+	(49)	116+	112+	113+	M	-0.1	63	33	85	G	G	G	VP	XX	F	P
CDC Teal	100	(86)	94-	102	101	E	-0.2	62	36	90	G	P	F	F	G	P	VP
CDC Thrive ▲ CL	109+	(49)	110	107	110+	E	0.3	63	36	88	G	P	G	F	F	F	P
CDC Utmost VB ▲	113+	(49)	116+	112+	111+	M	0.3	62	35	85	G	G	P	VP	F	F	P
Fieldstar VB ◊	102	(50)	102	102	102	M	-0.3	63	33	88	F	VG	F	G	P	XX	F
Glenn ◊	104	(49)	112+	100	104	L	0.4	65	37	85	VG	F	F	F	G	F	F
Goodeve VB ◊	106+	(84)	109+	104	104	M	0.3	62	37	88	VG	G	G	P	F	P	VP
Harvest ◊	102	(114)	98	103	104	M	0.1	62	37	83	VG	VG	G	F	G	P	VP
Infinity ◊	104+	(70)	104	104+	106	M	-0.3	62	33	89	G	G	G	F	P	P	VP
Journey	99	(69)	95	101	99	M	0.6	62	36	83	VG	G	F	G	F	P	P
Kane ◊	99	(51)	95-	98	102	M	0.1	64	36	85	G	VG	P	F	F	F	F
Katepwa	98	(301)	98	99	98	M	-0.1	62	35	93	F	F	G	G	P	P	F
Lillian ◊	105+	(83)	111+	100	104	M	-0.1	61	37	86	G	G	F	G	VG	P	VP
Lovitt ◊	97	(37)	96	95-	105	M	-0.3	62	35	89	G	VG	G	F	P	XX	VP
McKenzie	103+	(104)	101	104	105+	M	-0.9	62	34	90	F	VG	P	VG	P	F	F
Muchmore ◊	111+	(49)	121+	106	110	L	0	63	37	74	VG	G	G	G	G	P	P
Park	97	(45)	91-	98	102	VE	0.0	62	35	92	F	G	G	XX	P	P	VP
Peace	100	(53)	100	97	103	M	0.2	63	37	92	G	P	VG	VG	G	XX	VP
Prodigy †	104+	(84)	102	104	103	M	0.3	63	35	94	G	F	F	G	F	P	VP
Roblin	95-	(82)	91-	97	95-	VE	0.1	62	36	87	G	F	G	VP	F	VP	VP
Shaw VB ◊	113+	(49)	117+	109+	113+	M	0.2	63	37	92	G	G	P	G	XX	P	P
Somerset ◊	100	(50)	102	99	100	M	-0.2	62	36	97	G	F	VG	F	F	P	P
Stettler ◊	112+	(67)	120+	109+	111+	M	0.4	63	37	84	G	G	G	G	G	P	P
Superb ◊	112+	(177)	110+	111+	115+	L	-0.2	62	42	85	G	F	F	G	VP	P	P
Unity VB ◊	111+	(67)	112+	110+	111+	M	-0.4	64	36	90	G	G	P	VG	P	P	P
Vesper VB ▲	107+	(33)	108	109	105	M	-0.4	63	38	90	VG	F	F	P	VP	G	G
Waskada ◊	100	(67)	101	98	102	M	0.1	64	37	92	G	VG	G	G	P	P	G

SPRING WHEAT

Variety	Overall Yield	Overall Station Years of Testing	Yield Category ¹ (% AC Barrie)			Agronomic Characteristics							Disease Resistance ⁵				
			Low <45 (bu/ac)	Med 45 - 70 (bu/ac)	High >70 (bu/ac)	Mat. Rating ³	Prot. %	Te.Wt (lb/bu)	TSW ⁴ (g)	Ht (cm)	Resistance to: ⁵		Loose Smut	Bunt	Stripe Rust	Leaf Spot	FHB
											Lodg.	Sprout					
WR859 CL ☉	107+	(67)	111+	104	107+	M	0.4	63	35	81	G	G	VG	VG	F	P	G
CANADA WESTERN HARD WHITE																	
Snowbird ☉	101	(94)	99	101	101	M	-0.4	62	36	89	G	G	G	F	P	P	P
Snowstar ☉	102	(56)	99	103	102	M	-0.9	64	31	83	XX	G	P	P	P	F	P

Remarks: AC Eatonia and Lillian are adapted to sawfly areas. Alikat is adapted to acid soils. C.W. Red Spring Wheat grown under irrigation tends to have lower grades. CDC Abound, CDC Imagine, CDC Thrive and WR589 CL are tolerant to the CLEARFIELD® herbicides Adrenalin SC and Altitude FX. Fieldstar VB, Goodeve VB, Shaw VB, CDC Utmost VB and Vesper VB are CWRS wheat midge tolerant varieties. They contain the same "Sm 1" gene for tolerance. Glenn is a semi-dwarf variety. BW433, BW901 and HW024- insufficient data to describe. 5603HR - 2011 yield data was not included into the table due to poor seed. Varieties added to the table: Vesper VB. ☉ - Plant Breeder's Rights. ▲ - Plant Breeder's Rights applied for. † - Flagged for removal. XX - insufficient data to describe.

¹ Yield Test Categories are based on the site means for small plot trials. The defined range for each Yield Test Category is provided in bu/ac. The actual yields for AC Barrie are reported in the Overall and Low, Medium, and High Yield Test Categories. Note that small plot yields may be 10-15% higher than field scale results. ² Yields are reported relative to AC Barrie. Varieties that are statistically higher (+) or lower (-) yielding than AC Barrie are indicated. No symbol after the yield figure indicates that there is no statistical difference. ³ Maturities rated as: VE = Very Early; E = Early; M = Medium; L = Late and VL = Very Late. Long term average days to maturity for AC Barrie is 106 days and rated as Medium maturing (M). ⁴ Thousand Seed Weight. ⁵ Resistance Ratings: VG = Very Good; G = Good; F = Fair; P = Poor and VP = Very Poor. Varieties having a rating of Fair (F) or Poor (P) to loose smut or bunt should be treated with a systemic seed treatment to reduce the potential for plant infection.

SPRING WHEAT

Variety	Overall Yield	Overall Station Years of Testing	Yield Category ¹ (% AC Taber)			Agronomic Characteristics							Disease Resistance ⁵				
			Low <45 (bu/ac)	Med 45 - 90 (bu/ac)	High >90 (bu/ac)	Mat. Rating ³	Prot. %	Te.Wt (lb/bu)	TSW ⁴ (g)	Ht (cm)	Resistance to: ⁵		Loose Smut	Bunt	Stripe Rust	Leaf Spot	FHB
											Lodg.	Sprout					
CANADA PRAIRIE SPRING - RED																	
AC Taber (bu/ac)	71		37	68	109												
AC Taber ²	100	(297)	100	100	100	L	12.3	62	42	79	G	P	P	VG	VP	F	VP
5700PR ☉	102+	(117)	105	101	103+	M	0.4	62	42	75	VG	F	P	G	P	P	VP
5701PR ☉	101	(91)	101	101	94-	M	0.4	60	43	77	G	P	F	F	G	P	VP
5702PR ☉	101	(52)	113	99	98	M	0.4	61	40	79	G	P	P	F	P	F	P
AC Crystal ☉	99	(230)	97-	98-	102	L	0.3	62	43	79	G	P	F	VG	VP	F	VP
AC Foremost	98-	(124)	99	97-	100	M	XX	62	43	73	VG	F	F	VG	VP	P	VP
Conquer VB ☉	133+	(29)	XX	140+	106	M	XX	63	42	84	G	P	P	G	VG	F	P
SY985 ▲	126+	(29)	XX	131+	94	M	XX	62	44	79	G	F	VG	G	XX	F	F
CANADA WESTERN GENERAL PURPOSE																	
CDC NRG003 ▲	135+	(29)	XX	142+	106	M	XX	61	43	81	G	F	G	VG	XX	VP	VP
Minnedosa ☉	120+	(45)	121	124+	102	M	XX	62	42	83	G	G	F	G	G	P	P
NRG010 ☉	129+	(43)	XX	133+	106	L	XX	62	41	83	G	P	VG	VG	VG	P	VP

Remarks: Caution should be taken interpreting the data because AC Taber performed poorly in 2011 causing yield values for some new varieties to be unexpectedly high. CPS varieties are more susceptible to take-all root rot than other wheat classes. AC Taber yields about 20% higher than AC Barrie. AC Crystal, 5700PR, 5701PR, and 5702PR have improved quality compared to AC Foremost and AC Taber. 5700PR is grown under contract. Conquer VB is the only CPS-red midge tolerant variety using the "Sm 1" gene. Varieties in the General Purpose market class are intended for ethanol and livestock feed purposes. ☉ - Plant Breeder's Rights. ▲ - Plant Breeder's Rights applied for. XX - insufficient data to report. New varieties: Conquer VB (HY682); NRG010 (GP010), CDC NRG003 (GP003) and SY985 (HY985).

¹ Yield Test Categories are based on the site means for small plot trials. The defined range for each Yield Test Category is provided in bu/ac. The actual yields for AC Taber are reported in the Overall and Low, Medium and High Yield Test Categories. Note that small plot yields may be 10-15% higher than field scale results. ² Yields are reported relative to AC Taber. Varieties that are statistically higher (+) or lower (-) yielding than AC Taber are indicated. No symbol after the yield figure indicates that there is no statistical difference. ³ Maturities rated as: VE = Very Early; E = Early; M = Medium; L = Late and VL = Very Late. Long term average days to maturity for AC Taber is 108 days and rated as Late maturing (L). ⁴ Thousand Seed Weight. ⁵ Resistance Ratings: VG - Very Good; G - Good; F - Fair; P - Poor and VP - Very Poor. Varieties having a rating of Fair (F) or Poor (P) to loose smut or bunt should be treated with a systemic seed treatment to reduce the potential for plant infection.

SPRING WHEAT

Variety	Overall Yield	Overall Station Years of Testing	Yield Category ¹ (% Strongfield)			Agronomic Characteristics							Disease Resistance ⁵				
			Low <45 (bu/ac)	Medium 45 - 75 (bu/ac)	High >75 (bu/ac)	Mat. Rating ³ (lb/bu)	Te.Wt (lb/bu)	TSW ⁴ (g)	Height (cm)	Resistance to: ⁵			Loose Smut	Stripe Bunt	Leaf Rust	Leaf Spot	FHB
										Ldg	Shat.	Sprout					
CANADA WESTERN AMBER DURUM																	
Strongfield (bu/ac)	64		35	61	95												
Strongfield ² ◊	100	(94)	100	100	100	M	63	45	85	F	VG	F	VP	G	G	P	VP
AC Avonlea ◊	98	(60)	103	92-	100	M	63	44	90	F	G	F	VP	VG	F	P	P
AC Morse ◊	91-	(67)	95-	89-	93-	E	61	44	84	F	G	F	VP	VG	G	VP	VP
AC Navigator ◊	95-	(65)	102	93-	92-	M	63	45	77	G	G	G	VP	VG	VG	VP	VP
Brigade ◊	104+	(45)	101	105+	103	L	64	48	88	G	XX	F	P	G	G	F	P
CDC Verona ◊	102	(35)	99	105+	99	M	63	47	81	G	XX	F	P	G	VG	P	P
Commander ◊ †	103	(39)	XX	105	100	M	62	45	78	VG	VG	F	F	VG	F	P	VP
Enterprise ▲	102	(35)	102	101	103	M	64	45	82	G	XX	F	P	G	VG	G	P
Eurostar ◊	102	(45)	103	103	100	L	64	47	88	G	XX	F	P	VG	VG	F	P
Kyle	88-	(123)	90-	89-	85-	M	62	44	99	P	G	F	VP	VG	VG	P	P
Transcend ▲	100	(24)	97	101	101	M	63	50	89	F	XX	F	VP	VG	VG	F	P

Remarks: Generally durum wheat should only be grown in south and south-eastern portion of Alberta due to late maturity. Outside these areas, durum is late maturing and subject to quality loss. All durum varieties are susceptible to two new races of loose smut and are generally more susceptible than CWRS varieties to Fusarium Head Blight. Strongfield yields about 10% higher than AC Barrie in areas of best adaptation. AC Navigator, Brigade, Commander and Eurostar have stronger gluten and grown under contract. New varieties: Transcend (DT801). ◊ - Plant Breeder's Rights. ▲ - Plant Breeder's Rights applied for. † - Flagged for removal. XX - insufficient data to describe.

¹ Yield Test Categories are based on the site means for small plot trials. The defined range for each Yield Test Category is provided in bu/ac. The actual yields for Strongfield are reported in the Overall and Low, Medium and High Yield Test Categories. Note that small plot yields may be 10-15% higher than field scale results. ² Yields are reported relative to Strongfield. Varieties that are statistically higher (+) or lower (-) yielding than Strongfield are indicated. No symbol after the yield figure indicates that there is no statistical difference. ³ Maturities rated as: VE - Very Early; E - Early; M - Medium; L - Late and VL - Very Late. Long term average days to maturity for Strongfield is 105 days and rated as Medium maturing (M). ⁴ Thousand Seed Weight. ⁵ Resistance Ratings: VG - Very Good; G - Good; F - Fair; P - Poor and VP - Very Poor. Varieties having a rating of Fair (F) or Poor (P) to loose smut or bunt should be treated with a systemic seed treatment to reduce the potential for plant infection.

SPRING WHEAT

Variety	Overall Yield	Overall Station Years of Testing	Yield Category ¹ (% Amazon)			Agronomic Characteristics							Disease Resistance ⁵				
			Low <50 (bu/ac)	Medium 50 - 90 (bu/ac)	High >90 (bu/ac)	Mat. Rating ³ (lb/bu)	Te.Wt (lb/bu)	TSW ⁴ (g)	Height (cm)	Resistance to: ⁵			Loose Smut	Stripe Bunt	Leaf Rust	Leaf Spot	FHB
										Ldg	Shat.	Sprout					
CANADA WESTERN EXTRA STRONG																	
Amazon (bu/ac)	58		38	64	86												
Amazon ² ◊ †	100	(154)	100	100	100	L	61	46	97	G	G	P	VG	F	F	F	P
Bluesky †	99	(59)	97	99	103	E	61	44	96	F	G	P	XX	XX	P	P	P
CDC Rama †	108+	(60)	107+	107+	XX	L	63	48	97	F	G	G	VG	G	G	P	F
Laser †	97	(59)	90 -	98	103	E	61	39	88	VG	G	F	VG	VP	XX	P	VP

Remarks: Extra strong spring varieties have limited market potential. ◊ - Plant Breeder's Rights. XX - insufficient data to describe. † - Flagged for removal.

¹ Yield Test Categories are based on the site means for small plot trials. The defined range for each Yield Test Category is provided in bu/ac. The actual yields for Amazon are reported in the Overall and Low, Medium and High Yield Test Categories. Note that small plot yields may be 10-15% higher than field scale results. ² Yields are reported relative to Amazon. Varieties that are statistically higher (+) or lower (-) yielding than Amazon are indicated. No symbol after the yield figure indicates that there is no statistical difference. ³ Maturity rated as: VE = Very Early; E = Early; M = Medium; L = Late and VL = Very Late. Long term average days to maturity for Amazon is 110 days and rated as Medium maturing (M). ⁴ Thousand Seed Weight. ⁵ Resistance Ratings: VG - Very Good; G - Good; F - Fair; P - Poor and VP - Very Poor. Varieties having a rating of Fair (F) or Poor (P) to loose smut or bunt should be treated with a systemic seed treatment to reduce the potential for plant infection.

SPRING WHEAT

Variety	Overall Yield	Overall Station Years of Testing	Yield Category ¹ (% AC Andrew)			Agronomic Characteristics							Disease Resistance ⁵					
			Low	Med	High	Mat. Rtg ³	Prot. %	Te. (lb/bu)	Wt. TSW ⁴ (g)	Height (cm)	Resistance to: ⁵			Loose Smut	Bunt	Stripe Rust	Leaf Spot FHB	
			<55 (bu/ac)	55 - 85 (bu/ac)	>85 (bu/ac)						Ldg.	Shatter	Sprout					
SOFT WHITE SPRING WHEAT																		
AC Andrew (bu/ac)	83		44	74	115													
AC Andrew ²	100	(117)	100	100	100	L	11.5	62	38	79	VG	VG	P	VP	P	F	G	VP
AC Meena	97-	(51)	101	97-	95	L	-0.6	61	37	80	G	G	F	VP	VP	G	F	P
Bhishaj	100	(24)	XX	99	103	L	XX	62	37	85	VG	VG	F	G	VP	G	F	VP
Sadash [⊕]	110+	(51)	113+	109+	109+	L	-0.4	63	39	82	VG	VG	p	VP	VP	VG	F	P

Remarks: All soft white spring wheat varieties have a semi-dwarf stature. AC Andrew yields about 35% more than AC Barrie. SWS varieties may have potential demand as a feedstock in the production of ethanol. Soft white spring wheat is susceptible to pre-harvest sprouting. [⊕] - Plant Breeder's Rights. XX - insufficient data to describe.

¹ Yield Test Categories are based on the site means for small plot trials. The defined range for each Yield Test Category is provided in bu/ac. The actual yields for AC Andrew are reported in the Overall and Low, Medium and High Yield Test Categories. Note that small plot yields may be 10 - 15% higher than field scale results. ² Yields are reported relative to AC Andrew. Varieties that are statistically higher (+) or lower (-) yielding than AC Andrew are indicated. No symbol after the yield figure indicates that there is no statistical difference. ³ Maturities rated as: VE = Very Early; E = Early; M = Medium; L = Late and VL = Very Late. Long term average days to maturity for AC Andrew is 110 days and rated as Late maturing (L). ⁴ Thousand Seed Weight. ⁵ Resistance Ratings: VG = Very Good; G = Good; F = Fair; P = Poor and VP = Very Poor. Varieties having a rating of Fair (F) or Poor (P) to loose smut or bunt should be treated with a systemic seed treatment to reduce the potential for plant infection.

WINTER WHEAT

Variety	Overall Yield Station (% CDC Osprey) Testing	Yield Test Category ¹ (% CDC Osprey)				Agronomic Characteristics					Disease Resistance ³							
		Low <45 bu/ac	Medium 45-75 bu/ac	High 75-105 bu/ac	Very High >105 bu/ac	Winter Survival ³ Rating ⁴ (%)	Maturity Protein (%)	Height (cm)	Lodging Resist.	Shat. Resist.	Test Wt. (lb/bu)	TSW (g)	Kernel Hardness & Colour ⁵	Bunt	Stripe Rust	Leaf Rust	Stem Rust	FHB
CANADA WESTERN RED WINTER "SELECT"																		
CDC Osprey (bu/ac)	76	35	62	86	118													
CDC Osprey ²	100	100	100	100	100	VG	M	12.2	90	G	G	63	32	HR	VP	VP	P	P
AC Bellatrix	102+	110+	102	100	101	F	L	+0.3	88	G	G	64	36	HR	F	VP	VP	F
AC Readymade	96-	99	96-	95	97	P	VL	+1.7	90	VG	F	63	36	HR	P	XX	VP	XX
AC Tempest	98	100	97-	100	98	P	VL	+1.4	89	VG	G	63	37	HR	P	G	VP	F
CDC Butte	99	102	99	97	101	VG	M	+0.2	88	F	G	65	34	HR	VP	VP	G	G
Flourish \diamond	100	XX	103	97	XX	F	E	+0.5	78	VG	G	63	35	HR	F	F	F	VP
McClintock \diamond	96-	89	97	95	100	F	L	0.0	91	VG	G	64	32	HR	VP	G	G	VP
Moats \blacktriangle	108	XX	XX	108	XX	G	M	+0.4	89	G	G	65	33	HR	P	G	G	XX
Norstar	95-	103	96-	92-	88-	VG	L	-0.1	108	VP	G	64	33	HR	VP	XX	VP	G
Radiant \diamond	102+	105	101	103+	100	VG	L	-0.1	87	VG	G	63	36	HR	P	P	VP	VP
CANADA WESTERN RED WINTER "GENERIC"																		
CDC CLAIR	103+	103	103+	104	105+	VG	M	-0.4	88	F	G	63	34	HR	VP	XX	P	XX
CDC Falcon	102	94	103	102	103	F	E	-0.4	73	VG	G	63	31	HR	VP	VP	G	VP
CDC Harrier	106+	108	106+	105+	104	G	M	-1.0	93	G	G	62	31	HR	VP	VP	P	P
CDC Kestrel	104+	106	104	105+	102	VG	M	-1.4	93	G	G	62	32	HR	VP	XX	P	XX
CDC Raptor	101	99	102	102	98	G	M	-0.4	81	VG	G	63	30	HR	VP	XX	G	XX
CANADA WESTERN GENERAL PURPOSE																		
Accipiter \blacktriangle	108+	XX	109	107+	105	G	M	-0.2	81	VG	G	64	30	HR	VP	XX	G	VP
Broadview \diamond	104+	XX	106	103	XX	G	E	-0.7	78	G	G	63	32	HR	VP	VP	VG	VP
CDC Parmigan	111+	XX	112+	109+	111+	G	M	-2.0	90	F	G	61	34	SW	VP	VP	P	XX
Peregrine \blacktriangle	109+	XX	108	109+	105	VG	M	-0.4	94	F	G	64	34	HR	VP	G	VG	P
Sunrise	112+	XX	XX	112+	XX	G	M	-0.7	87	G	G	61	33	SR	VP	G	G	XX

Remarks: Winter wheat can be grown successfully in all areas of Alberta if seeded into standing stubble within the optimal seeding date period (generally before September 15) and if there is adequate snowfall. Varieties with Poor winter survival are generally not suitable outside of southern Alberta. The provincial average maturity date for CDC OSPREY is August 7 (219 days after January 1). Radiant has resistance to the wheat curl mite, the vector that carries Wheat Streak Mosaic Virus. AC Bellatrix and Flourish are the only varieties with resistance to common bunt; other varieties should be treated with a systemic seed treatment to reduce the potential for plant infection. Winter wheat will normally escape Fusarium head blight infection if seeded before September 15. Fields in southern Alberta should be inspected in the fall for infestation by Russian wheat aphid, as it may reduce winter survival. CWRW Select varieties may receive price and protein premiums. Winter wheat is a good feedstock for ethanol production. Note that the Canadian Grain Commission advises that CDC CLAIR, CDC Harrier, CDC Kestrel and CDC Raptor will be moved to the Canada Western General Purpose class effective August 1, 2013. The reclassification of CDC Falcon to the CWGP class is likely to be delayed until 2014. Flourish and Moats will not be available in fall 2012.

¹ Yield Test Categories are based on the site means for small plot trials. The defined range for each Yield Test Category is provided in bu/ac. The actual yields (bu/ac) for CDC OSPREY are reported in the Overall and Low, Medium, High, and Very High Yield Test Categories. Note that small plot yields may be 10-15% higher than field scale results. ² All yields are reported relative to CDC OSPREY. Varieties that are statistically higher (+) or lower (-) yielding than CDC OSPREY are indicated. No symbol after the yield figure indicates that there is no statistical difference. ³ Ratings for Disease Resistance, Winter Survival, Lodging Resistance, and Shattering Resistance: VP = Very Poor, P = Poor, F = Fair, G = Good, VG = Very Good. ⁴ Maturity Ratings: VE = Very Early, E = Early, M = Medium, L = Late, VL = Very Late. ⁵ Abbreviations for Kernel Hardness and Colour: HR = Hard Red, SW = Soft White, SR = Soft Red.

F A L L R Y E

Variety	Overall Yield (% Prima)	Overall Station Years of Testing	Yield Test Category ¹ (% Prima)				Agronomic Characteristics							
			Low <48 bu/ac	Medium 48-80 bu/ac	High 80-112 bu/ac	Very High >112 bu/ac	Winter Survival ³	Maturity Rating ⁴	Height (cm)	Lodging Resist. ³	Shat. Resist. ³	Test Weight (lb/bu)	TSW ⁴ (g)	
Prima (bu/ac)	80		36	60	93	139								
Prima ²	100	(79)	100	100	100	100	EX	E	119	F	F	F	58	33
AC Remington	101	(31)	120	100	98	88 -	EX	M	97	G	VG	VG	57	30
AC Rifle	101	(79)	114	106	97	87 -	EX	E	87	VG	VG	VG	57	30
Dakota	120+	(45)	120+	123+	116+	XX	EX	M	111	F	XX	XX	56	34
Hazlet	119+	(22)	XX	128+	XX	106	EX	M	105	G	XX	XX	58	39
Musketeer	91-	(40)	88 -	92	93	93	EX	M	120	F	F	F	56	33

Remarks: The provincial average maturity date for Prima is August 3 (215 days after January 1). AC Rifle and AC Remington are semi-dwarf varieties. Hazlet has lower viscosity which improves feed performance in monogastric livestock. No data for fall rye variety performance were collected during 2009-2011.

¹ Yield Test Categories are based on the site means for small plot trials. The defined range for each Yield Test Category is provided in bu/ac. The actual yields (bu/ac) for Prima are reported in the Overall and Low, Medium, High, and Very High Yield Test Categories. Note that small plot yields may be 10-15% higher than field scale results. ² All yields are reported relative to Prima. Varieties that are statistically higher (+) or lower (-) yielding than Prima are indicated. No symbol after the yield figure indicates that there is no statistical difference.

³ Ratings for Winter Survival, Lodging Resistance, and Shattering Resistance: VP = Very Poor, P = Poor, F = Fair, G = Good, VG = Very Good. ⁴ Maturity Ratings: VE = Very Early, E = Early, M = Medium, L = Late, VL = Very Late.

See page 18 for symbols used.

F L A X

Variety	Overall Yield	Overall Station Years of Testing	Yield Category ¹ (% CDC Bethune)				Agronomic Characteristics			
			Low <20 bu/ac	Medium 20 - 35 bu/ac	High 35 - 50 bu/ac	Very High >50 bu/ac	Maturity Rating ³	Seed Size	Height (cm)	Resistance to Lodging ⁴
CDC Bethune bu/ac	35		14	28	42	60				
CDC Bethune ² ☉	100	(98)	100	100	100	100	L	M	58	VG
CDC Arras †	94-	(27)	97	95	97	87-	L	L	61	F
CDC Sorrel ☉	104	(32)	112	107	98	99	L	L	61	G
Flanders	100	(43)	108	100	98	97	L	S	57	G
Hanley ☉	97	(35)	98	101	94	97	L	M	52	VG
NorLin †	95-	(92)	107	93-	93-	90-	M	M	57	G
Prairie Grande ☉	98	(42)	101	99	97	97	M	M	53	VG
Prairie Thunder ☉	99	(34)	106	95	97	XX	M	M	53	VG
Taurus ☉	98-	(27)	108	95	XX	XX	L	M	53	VG

Remarks: Prairie Sapphire (FP2214) and FP2270 - insufficient data to describe. Macbeth dropped. FP2242 and Prairie Blue were tested in 2009 only. ☉ - Plant Breeder's Rights. † - Flagged for removal. XX - insufficient data to describe.

¹ Yield Test Categories are based on the site means for small plot trials. The defined range for each Yield Test Category is provided in bu/ac. The actual yields for CDC Bethune are reported in the Overall and Low, Medium, High, and Very High Yield Test Categories. Note that small plot yields may be 10-15% higher than field scale results. ² Yields are reported relative to CDC Bethune. Varieties that are statistically higher (+) or lower (-) yielding than CDC Bethune are indicated. No symbol after the yield figure indicates that there is no statistical difference. ³ Maturities ratings: VE = Very Early; E = Early; M = Medium; L = Late and VL = Very Late. Long term average maturity for CDC Bethune in Alberta is 111 days and rated as Late maturing (L). ⁴ Resistance to Lodging: VG = Very Good; G = Good; F = Fair; P = Poor and VP = Very Poor.

See page 18 for symbols used.

SPRING TRITICALE

Variety	Overall Yield	Overall Station Years of Testing	Yield Category ¹ (% Pronghorn)				Agronomic Characteristics					Disease Resistance ⁵					
			Low <60 bu/ac	Med 60 - 80 bu/ac	High 80 - 110 bu/ac	V. High >110 bu/ac	Maturity Rating ³	Test Wt (lb/bu)	TSW ⁴ (g)	Height (cm)	Resistance to: ⁵			Loose Smut	Bunt	FHB	
											Ldg.	Shat.	Sprout				
Pronghorn	88		48	76	104	138											
Pronghorn ²	100	(225)	100	100	100	100	M	55	43	101	G	G	F	VG	VG	G	
AC Ultima	100	(166)	101	100	99	101	E	56	45	97	G	G	F	VG	VG	F	
Bumper ◊	102	(37)	111+	XX	98	92-	E	58	45	89	VG	G	F	XX	VG	P	
Bunker ◊	90-	(49)	89-	94	87-	92-	VL	57	48	107	F	G	F	VG	VG	F	
Companion	92-	(50)	94-	97	85-	89-	M	55	51	116	XX	XX	XX	VG	VG	XX	
Sunray	94-	(26)	95-	XX	93-	XX	E	56	44	91	VG	G	F	VG	VG	P	
Taza ▲	96-	(26)	94	XX	96	XX	M	57	45	99	G	G	F	VG	VG	VP	
Tyndal ◊	101	(53)	106	101	96	95-	L	57	44	97	G	G	P	VG	VG	P	

Remarks: All varieties are late maturing compared to CWRS wheat (approximately five days later). Companion is a forage type. Bunker, Taza, and Tyndal are reduced-awn varieties. T200 - insufficient data to describe. Pronghorn yields about 30% more than AC Barrie (CWRS wheat) in areas of adaptation. Sunray has improved resistance to ergot. New varieties: Sunray (T204) and Taza (T198). ◊ - Plant Breeder's Rights. ▲ - Plant Breeder's Rights applied for.

¹ Yield Test Categories are based on the site means for small plot trials. The defined range for each Yield Test Category is provided in bu/ac. The actual yields for Pronghorn are reported in the Overall and Low, Medium, High, and Very High Yield Test Categories. Note that small plot yields may be 10-15% higher than field scale results. ² Yields are reported relative to Pronghorn. Varieties that are statistically higher (+) or lower (-) yielding than Pronghorn are indicated. No symbol after the yield figure indicates that there is no statistical difference. ³ Maturities rated as: VE = Very Early; E = Early; M = Medium; L = Late and VL = Very Late. Long term average days to maturity for Pronghorn is 112 days and rated as Medium maturing (M). ⁴ Thousand Seed Weight. ⁵ Resistance Ratings: VG = Very Good; G = Good; F = Fair; P = Poor and VP = Very Poor. Varieties having a rating of Fair (F) or Poor (P) to loose smut or bunt should be treated with a systemic seed treatment to reduce the potential for plant infection.

See page 18 for symbols used.

WINTER TRITICALE

Variety	Overall Yield ¹ (% Pika)	Overall Station Years of Testing	Agronomic Characteristics					
			Winter Survival ³	Maturity Rating ⁴	Height (cm)	Lodging Resist. ³	Test Weight (lb/bu)	TSW ⁴ (g)
Pika (bu/ac)	73							
Pika²	100	(42)	VG	L	119	VP	54	38
Bobcat	94	(40)	F	VL	99	G	54	36
Luoma	105	(14)	VG	VL	118	F	54	39
Metzger	102	(14)	VG	L	107	G	54	35
CDC Osprey (W. Wheat)	111+	(28)	VG	M	88	G	64	32

Remarks: The provincial average maturity date for Pika is August 12 (224 days after January 1) or about a week later than winter wheat. Winter triticale has a winter hardiness potential slightly lower than winter wheat. Bobcat, Luoma and Metzger have heads with reduced awn length (awnletted), making them more palatable in forage applications. No data for winter triticale variety performance were collected during 2009-2011.

¹ The actual yields (bu/ac) for Pika are reported. Note that small plot yields may be 10-15% higher than field scale results.

² All yields are reported relative to Pika. Varieties that are statistically higher (+) or lower (-) yielding than Prima are indicated. No symbol after the yield figure indicates that there is no statistical difference. ³ Ratings for Winter Survival and Lodging Resistance: VP = Very Poor, P = Poor, F = Fair, G = Good, VG = Very Good. ⁴ Maturity Ratings: VE = Very Early, E = Early, M = Medium, L = Late, VL = Very Late.

See page 18 for symbols used.

FEED AND FOOD BARLEY

Variety	2 or 6 Row	Awn Type ¹	Overall Yield	Overall Station Years of Testing	Yield Category (% AC Metcalfe)				Agronomic characteristics					Disease Resistance: ⁶					
					Low <60 bu/ac	Medium 60-90 bu/ac	High 90-120 bu/ac	V. high >120 bu/ac	Mat. Rating ⁴ (lb/bu)	Test Wt. (g)	TSW ⁵ (g)	Ht. (cm)	Resist. to Ldg. ⁶	Loose Smut	Other Smuts	Root Rot	Scald	Spot Form Blotch	Net Form Blotch
					48	79	104	133	M	52	46	80	F	VG	F	VP	F	VP	F
AC Metcalfe (bu/ac)			100																
AC Metcalfe ³ ◊	2	R	100	(422)	100	100	100	100	M	52	46	80	F	VP	F	VP	F		
AC Harper ◊ *	6	SS	103+	(166)	94	96-	102	111+	M	48	40	80	G	F	F	F	P		
AC Lacombe ◊ *	6	S	107+	(194)	98	100	107+	115+	M	48	42	84	G	P	G	P	VP		
AC Ranger *	6	S	107+	(48)	100	99	118+	108+	L	49	43	74	F	P	G	F	VP		
AC Rosser ◊ *	6	S	110+	(166)	100	103	111+	117+	M	48	41	82	G	P	VG	G	VP		
Busby ◊	2	R	104+	(45)	107	103	106	103	M	53	49	78	G	VP	G	F	P		
CDC Austenson ◊	2	R	111+	(61)	108	111+	111+	112+	L	54	46	78	G	VP	VG	P	F		
CDC Coalition ◊	2	R	109+	(53)	107	110+	108+	109+	L	53	47	74	G	VP	VG	VP	F		
CDC Cowboy ◊	2	R	95-	(75)	107	94-	93-	95-	L	52	55	103	F	P	G	F	G		
CDC Dolly	2	R	101	(184)	97	100	103+	100	M	53	49	74	F	VP	F	VP	G		
CDC Helgason ◊	2	R	104+	(101)	96	99	106+	114+	E	52	46	75	G	VG	G	VP	P		
CDC Mindon ◊	2	R	99	(47)	XX	98	103	96-	M	52	48	77	G	VG	VG	VP	G		
CDC Trey ◊	2	R	104+	(106)	98	103	103	109+	M	52	50	80	G	P	VG	F	F		
Champion ◊	2	R	112+	(97)	124+	111+	111+	110+	M	53	48	78	G	VP	VG	F	VP		
Chigwell ◊	6	S	104	(43)	XX	98	106	111+	M	49	40	77	G	P	G	F	VP		
Conlon ◊	2	S	94-	(63)	94	92-	93-	95-	VE	52	52	79	G	VP	G	F	G		
Gadsby ▲	2	R	109+	(31)	XX	109+	110+	108+	M	53	52	84	F	VG	VG	P	F		
Manny ◊†	6	R	110+	(77)	99	101	113+	119+	E	48	41	86	G	XX	VG	P	P		
Niobe ◊†	2	R	105+	(63)	96	97	108+	113+	E	50	45	75	G	P	G	P	P		
Ponoka ◊	2	R	110+	(120)	98	107+	112+	112+	L	50	46	79	G	VG	VG	P	F		
Seebe	2	R	100	(229)	91-	98	103	102	VL	52	50	86	G	VP	G	P	VP		
Stander ◊	6	SS	104+	(76)	XX	101	100	111+	M	51	41	84	G	P	P	VP	VP		
Sundre ◊	6	S	111+	(68)	97	111	109+	121+	L	51	43	85	G	P	VG	F	VP		
Trochu ◊	6	S	110+	(136)	99	106	110+	120+	M	49	42	79	G	P	VG	F	F		
XENA ◊	2	R	112+	(229)	107	109+	114+	115+	M	52	49	78	G	VP	F	VP	G		

FEED AND FOOD BARLEY (continued)

Variety	2 or 6 Row	Awn Type ¹	Overall Station Years of Testing	Yield Category (% AC Metcalfe)				Agronomic characteristics				Disease Resistance: ⁶					
				Low <60 bu/ac	Medium 60 - 90 bu/ac	High 90 - 120 bu/ac	V. high >120 bu/ac	Mat. Rating ⁴ (lb/bu)	Test Wt. (g)	TSW ⁵ (g)	Ht. (cm)	Resist. to Ldg. ⁶	Loose Smut	Other Smuts	Root Rot	Scald	Spot Form Blotch
SEMI-DWARF																	
CDC Bold	2	R	(77)	111+	107+	106+	102	M	53	48	72	VG	VP	F	VP	F	VP
Mahigan Δ *†	6	SS	(111)	85-	92-	102	110+	M	49	36	76	VG	VP	F	G	F	VP
Vivar Δ	6	R	(106)	101	104	110+	117+	M	49	44	73	VG	F	VG	G	F	VG
HULLLESS																	
CDC Carter Δ	2	R	(45)	97	99	94-	XX	M	62	39	77	VG	VG	VP	P	G	F
CDC McGwire Δ †*	2	R	(107)	88-	93-	99	XX	M	61	39	80	VG	P	G	F	G	F
Falcon Δ †	6	S	(181)	72-	83-	91-	89	E	58	35	68	VG	P	G	F	F	VP
Millhouse Δ †	2	R	(35)	85-	86-	80-	XX	M	57	42	87	F	VP	G	F	P	F
Tyto	6	S	(72)	76-	80-	96	96	M	55	39	73	VG	VP	VG	F	F	VP

Remarks: General Purpose barley varieties are described as follows: 1) General Purpose varieties - standard height; 2) Semi Dwarf - varieties shorter than standard General Purpose varieties and 3) Hullless - Hullless General Purpose type. In hullless varieties comparable yields are 9-12% lower. Hullless seed is more susceptible to damage than hulled seed, so handling should be minimized. CDC Carter, CDC McGwire and Millhouse are normal starch hullless barleys suitable for food use. Two row FB205 and six row BT584 - insufficient information to describe. Δ - Plant Breeder's Rights. \square - Plant Breeder's Rights applied for. † - Flagged for removal. * - Varieties have limited data compared with AC Metcalfe. XX - insufficient data to describe.

¹ Awn types describe as R = rough, S = smooth and SS = semi-smooth. ² Yield Test Categories are based on the site means for small plot trials. The defined range for each Yield Test Category is provided in bu/ac. The actual yields for AC Metcalfe are reported in the Overall and Low, Medium, High, and Very High Yield Test Categories. Note that small plot yields may be 10-15% higher than field scale results. ³ Yield are reported relative to AC Metcalfe. Varieties that are statistically higher (+) or lower (-) yielding than AC Metcalfe are indicated. No symbol after the yield figure indicates that there is no statistical difference. ⁴ Maturities rated as: VE = Very Early; E = Early; M = Medium; L = Late and VL = Very Late. Long term average days to maturity for AC Metcalfe is 95 days and rated as Medium maturing (M). ⁵ Thousand Seed Weight. ⁶ Resistance Ratings: VG = Very Good; G = Good; F = Fair; P = Poor and VP = Very Poor. Varieties having a rating of Fair (F) or Poor (P) to loose smut or bunt should be treated with a systemic seed treatment to reduce the potential for plant infection.

See page 18 for symbols used.

MALTING BARLEY

Variety	2 or 6 Row	Awn Type ¹	Overall Yield	Overall Station Years of Testing	Yield Category ² (% AC Metcalfe)				Agronomic characteristics					Disease Resistance: ⁵										
					Low <60 bu/ac	Medium 60-90 bu/ac	High 90-120 bu/ac	V. high >120 bu/ac	Mat. Rating ⁴ (lb/bu)	Test Wt. (g)	TSW ⁵ (g)	Ht. (cm)	Resist. to Ldg. ⁵	Loose Smut	Other Smuts	Root Rot	Scald	Spot Form Blotch	Net Form Blotch					
					bu/ac	bu/ac	bu/ac	bu/ac	Rating ⁴ (lb/bu)	Test Wt. (g)	TSW ⁵ (g)	Ht. (cm)	Resist. to Ldg. ⁵	Loose Smut	Other Smuts	Root Rot	Scald	Spot Form Blotch	Net Form Blotch					
MALTING ACCEPTANCE: RECOMMENDED																								
AC Metcalfe (bu/ac)			100			48	79	104	133															
AC Metcalfe ³ ◊	2	R	100	(423)	100	100	100	100	100	M	52	47	82	F	VG	F	VP	F	VP	F	VP	F	VP	
CDC Copeland ◊	2	R	104+	(137)	93	101	108+	109+	109+	M	51	47	81	F	P	F	VP	F	VP	F	F	F	F	
CDC Meredith ◊	2	R	108+	(61)	102	109+	108+	108+	108+	L	51	46	75	F	VG	F	VP	VG	VP	VG	VP	VP	VP	F
Legacy ◊	6	SS	102	(122)	91-	99	103	111+	111+	M	49	40	82	G	F	G	VP	G	VP	G	G	VP	P	P
Newdale ◊	2	R	103+	(90)	102	102	104	104+	104+	M	52	46	72	F	VP	G	P	P	P	G	G	F	F	F
Stellar-ND ◊	6	SS	94-	(73)	XX	88-	94-	103	103	E	49	41	79	G	G	G	P	P	P	F	G	F	P	F
Tradition ◊	6	SS	101	(121)	88-	99	102	110+	110+	E	50	40	81	G	VP	G	VP	F	VP	F	G	F	VP	VP
MALTING ACCEPTANCE: UNDER TEST																								
Bentley ◊	2	R	105+	(61)	109	102	104+	105+	105+	M	52	47	81	G	P	G	VP	VP	VP	G	G	VP	P	P
CDC Clyde ◊	6	SS	103	(77)	93	104	101	108+	108+	VE	49	40	76	G	F	VG	P	P	P	G	G	G	F	VP
CDC Kamsack ◊	6	R	97	(37)	XX	90-	99	109	109	M	48	41	69	G	F	G	P	P	P	F	G	F	VP	VP
CDC Kindersley ◊	2	R	102	(31)	XX	102	99	103	103	E	XX	XX	79	G	VP	VG	F	VP	VP	G	VG	F	P	F
CDC Mayfair ◊	6	R	97	(52)	XX	91-	96	104	104	E	48	40	75	G	VP	G	VP	VP	VP	G	G	G	P	P
CDC Reserve ◊	2	R	102	(61)	112	101	99	102	102	M	53	44	78	F	VP	P	P	P	P	F	F	P	VP	P
Celebration	6	SS	94	(27)	XX	87-	99	XX	XX	M	50	40	79	G	VG	VG	VP	VP	VP	G	VG	G	VP	P
Cerveza ▲	2	R	109+	(45)	XX	109+	108+	110+	110+	M	51	46	74	F	VG	VG	VP	VP	VP	G	VG	G	P	F
Major ◊	2	R	106+	(45)	XX	106	107+	106+	106+	M	51	44	74	G	VG	VG	P	P	P	G	G	G	F	F
Merit 57 ◊	2	R	109+	(83)	108	108+	109+	109+	109+	VL	51	44	79	F	P	VP	P	P	P	F	F	F	P	G
Norman ◊	2	R	97-	(47)	XX	94-	97	98	98	M	52	43	75	G	VP	VP	VP	VP	VP	G	VG	VG	P	G

MALTING BARLEY (continued)

Variety	2 or 6 Row	Awn Type ¹	Overall Yield	Overall Station Years of Testing	Yield Category ² (% AC Metcalfe)					Agronomic characteristics					Disease Resistance: ⁵					
					Low <60 bu/ac	Medium 60-90 bu/ac	High 90-120 bu/ac	V. high >120 bu/ac	Mat. Rating ⁴	Test Wt. (lb/bu)	TSW ⁵ (g)	Ht. (cm)	Resist. to Ldg. ⁵	Loose Smut	Other Smuts	Root Rot	Scald	Spot Form Blotch	Net Form Blotch	
									Rating ⁴											
MALTING ACCEPTANCE: OTHER																				
CDC Battleford ⚡ †	6	S	105+	(107)	94	101	104	117+	M	49	41	84	G	P	G	G	P	VP		
CDC ExPlus ⚡	2	R	87-	(30)	XX	89-	88-	XX	M	60	44	82	VG	VP	P	VP	VP	F	G	
CDC Kendall ⚡	2	R	98-	(165)	100	98	97-	96-	E	52	45	78	F	P	P	G	VP	G	F	
CDC Yorkton †	6	S	106+	(96)	XX	106	105+	111+	M	47	39	81	G	P	G	G	P	G	VP	
Excel † *	6	SS	102	(50)	95	106	100	102	M	50	40	75	G	P	F	G	VP	F	VP	
Formosa †	2	R	97	(36)	XX	98	95	101	M	53	48	79	XX	XX	XX	XX	VP	F	VP	
Harrington	2	R	93-	(284)	99	96-	92-	89-	M	50	44	78	F	P	P	F	VP	P	VP	

Remarks: Malting Barley varieties are described as follows: Recommended: varieties with market acceptance and recommended by the Canadian Malting Barley Technical Centre (CMBTC); Under Test: varieties currently undergoing evaluation for market acceptance; and Other: not currently recommended but varieties where a market may exist. Two row CDC PolarStar and HB08304 and six row BT584 and CDC Anderson varieties - insufficient data to describe. * - Varieties have limited data compared with AC Metcalfe. ⚡ - Plant Breeder's Rights. ▲ - Plant Breeder's Rights applied for. † - Flagged for removal.

¹ Awn types describe as R = rough, S = smooth and SS = semi-smooth. ² Yield Test Categories are based on the site means for small plot trials. The defined range for each Yield Test Category is provided in bu/ac. The actual yields for AC Metcalfe are reported in the Overall and Low, Medium, High, and Very High Yield Test Categories. Note that small plot yields may be 10-15% higher than field scale results. ³ Yield are reported relative to AC Metcalfe. Varieties that are statistically higher (+) or lower (-) yielding than AC Metcalfe are indicated. No symbol after the yield figure indicates that there is no statistical difference. ⁴ Maturities rated as: VE - Very Early; E - Early; M - Medium; L - Late and VL - Very Late. Long term average days to maturity for AC Metcalfe is 95 days and rated as Medium maturing (M). ⁵ Resistance Ratings: VG - Very Good; G - Good; F - Fair; P - Poor and VP - Very Poor. Varieties having a rating of Fair (F) or Poor (P) to loose smut or bunt should be treated with a systemic seed treatment to reduce the potential for plant infection.

See page 18 for symbols used.

O A T S

Variety	Overall Station Years of Testing	Yield Category 1 (% CDC Dancer)				Agronomic Characteristics					
		Low <70 bu/ac	Med 70 - 100 bu/ac	High 100 - 130 bu/ac	Very High >130 bu/ac	Maturity Rating 3	Test Weight (lb/bu)	TSW 4 (g)	Height (cm)	Resistance to Lodging 5	Resistance to Smut 5
MILLING											
CDC Dancer (bu/ac)	95	50	86	116	146		41	37	93	G	VG
CDC Dancer 2	(98)	100	100	100	100	E	41	38	94	VG	F
AC Juniper	(80)	100	102	105+	103	E	40	41	92	VG	F
AC Morgan	(93)	109+	112+	110+	118+	M	39	37	100	G	VP
Bradley ▲	(31)	XX	103	108	106	E	39	39	100	G	VG
Cascade	(159)	103	102	102	101	E	39	37	100	G	VG
CDC Big Brown ◊	(21)	XX	105	XX	110+	M	41	39	100	G	VG
CDC Boyer	(89)	103	103	100	105	M	39	42	101	G	P
CDC Minstrel ◊	(51)	99	103+	103	105+	M	39	38	89	VG	VG
CDC Orrin ◊	(52)	113+	107+	107+	XX	M	41	40	84	G	VG
CDC ProFi †	(30)	98	94-	94	87-	M	38	41	80	G	P
CDC Weaver ◊	(44)	108+	103	100	100	M	40	43	91	F	VG
Derby	(79)	103	102	96-	105	L	41	39	103	G	P
Jordan ◊	(36)	112+	109+	117+	XX	VL	38	44	87	G	VG
Leggett ◊	(40)	97	93	93-	XX	M	41	39	88	G	VG
Ronald ◊	(55)	98	92	98	101	M	41	37	83	VG	VG
SW Betania ◊ †	(43)	106+	104	97	XX	E	40	39	88	G	G
Triactor ◊	(43)	109	106+	114+	110+	M	38	39	88	G	VG
FEED											
AC Mustang *	(104)	119+	112+	110+	117+	L	42	38	103	G	F
Lu *	(54)	99	98	99	110	VE	41	39	84	G	VG
FORAGE											
CDC Baler *	(42)	97	106	96	XX	L	40	43	99	XX	VP
Murphy ◊ *	(51)	93	96	97	94	M	39	36	108	XX	VP

Remarks: Use higher seeding rates for large seeded varieties. CDC Seabiscuit and OT 2069 - insufficient data to describe. New varieties: CDC Seabiscuit (OT 3036) and CDC Morrison (OT 3044).
 ◊ - Plant Breeder's Rights. ▲ - Plant Breeder's Rights applied for. † - Flagged for removal.
 * These varieties have limited data compared to CDC Dancer and yields have been adjusted to CDC Dancer from Cascade.

¹ Yield Test Categories are based on the site means for small plot trials. The defined range for each Yield Test Category is provided in bu/ac. The actual yields (bu/ac) for CDC Dancer are reported in the Overall and Low, Medium, High, and Very High Yield Test Categories. Note that small plot yields may be 10-15% higher than field scale results. ² Yields are reported relative to CDC Dancer. Varieties that are statistically higher (+) or lower (-) yielding than CDC Dancer are indicated. No symbol after the yield figure indicates that there is no statistical difference.

³ Maturities rated as: VE = Very Early; E = Early; M = Medium; L = Late and VL = Very Late. Long term average days to maturity for CDC Dancer is 98 days and rated as Early maturing (E).
⁴ Thousand Seed Weight. ⁵ Resistance to Lodging and Smuts Ratings: VG = Very Good; G = Good; F = Fair; P = Poor and VP = Very Poor.

Symbols used:

- † Denotes variety may not be described in 2011.
- XX Denotes insufficient test data to describe.
- ⊕ Denotes variety protected by Plant Breeder's Rights.
- ▲ Denotes protection under Plant Breeder's Rights has been applied for.

Abbreviations used:

Awn Type: R = Rough, S = Smooth, SS = Semi-smooth
Rel. Maturity: Relative maturity rating, where VE = Very Early, E = Early, M = Medium, L = Late, VL = Very Late.
Comp. Protein = Comparative protein content in (+ or -) per cent from the check variety.
TWT = Test Weight (lb/bu) pounds per bushel. Multiply lb/bu by 1.25 to obtain kilograms per hectoliter.
KWT = Kernel weight (grams/1000 kernels).
Ht. = Height in centimeters.
Seed Size: S = Small, M = Medium, M-L = Medium Large, L = Large.
Ldg. = Lodging; Shat. = Shattering: VG = Very Good, G = Good, F = Fair, P = Poor, VP = Very Poor.
Winter Survival: EX = Excellent (reserved for fall rye), VG = Very Good, G = Good, F = Fair, P = Poor, VP = Very Poor
Com. Rt. Rot = Common root rot; FL & Cov. Smut = False loose & covered smuts.
Net Blt. = Net blotch: VG = Very Good, G = Good, F = Fair, P = Poor, VP = Very Poor.
Sprout Toler. = Sprouting Tolerance: VG = Very Good, G = Good, F = Fair, P = Poor, VP = Very Poor.
Leaf Spot: VG = Very Good, G = Good, F = Fair, P = Poor, VP = Very Poor.
Toler. FHB = Fusarium Head Blight Tolerance: VG = Very Good, G = Good, F = Fair, P = Poor, VP = Very Poor.

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Canola variety information

Where are Canola Performance Trials results available?

Results for the 2011 canola performance trials are available through an online interactive tool at www.canolaperformancetrials.ca on the Canola Council of Canada website. The interactive tool will allow growers to explore many agronomic factors and to search for trial data in specific geographic areas near their farming operations.

Details on management, operations and environmental data for each individual site will be reported online. The online tool will have an economic calculator that includes the costs associated with growing the selected variety to assist growers in determining potential profitability.

Data will also be available in booklet form that will be distributed through various publications and can be obtained from local agri-retailers.

Canola variety testing

The Prairie Canola Variety Testing (PCVT) program conducted until 2009 was replaced with the Canola Performance Trials (CPT) in 2011. The CPT trials represent the next generation in variety evaluation for Western Canadian canola growers. The trials were designed to provide the following:

- relevant, unbiased and timely performance data that reflects actual production practices
- comparative data on leading varieties and newly introduced varieties
- detailed reporting on agronomic characteristics such as yield, height, lodging, maturity and economic performance, and site specific performance variables including weather, soil type, crop nutrition, seeding and harvest management

The 2011 CPT trials were conducted under the guidance of a governance committee that oversaw approvals of participating varieties, protocol design, data collection, analysis, reporting and finance management. The Canola Council of Canada delivered the program on the committee's behalf.

The CPT program included 23 small plot trials and 108 field scale trials in 2011. The trial sites were distributed based on seeded acres in Manitoba, Saskatchewan and Alberta.

Small plot trials included popular varieties and newly introduced varieties. The new small plot system ensured several outcomes:

- All varieties were treated with appropriate herbicides and seed treatments.
- An independent third-party representative inspected all trials.
- Harvest occurred at the most appropriate time to minimize harvest losses due to maturity differences.

Field scale comparisons added extra perspective for assessing consistency in variety performance.

To ensure quality data, the CPT governance committee established protocols and developed research plot designs to ensure the data is representative. Performance objectives were established to provide guidelines on timely field operations and data collection. All sites were inspected to verify that guidelines were followed to allow a fair comparison among the varieties tested.

Audits of field-scale projects give growers the confidence that the protocol was conducted in a scientifically sound manner and that comparisons are appropriate. Qualified professionals with extensive backgrounds in conducting field-scale research trials performed the audits.

Brassica napus ('Argentine' canola)

Argentine varieties yield more but mature about two weeks later than *B. rapa* ('Polish' canola) varieties. Due to the late maturity, Argentine canola is better suited to the mid and long season growing areas. Argentine varieties are susceptible to seed shattering when left standing at full maturity. Later maturing varieties tend to produce higher levels of green seed under wet and cool conditions at harvest, which can cause substantial grade reductions.

Brassica rapa ('Polish' canola)

Polish varieties mature approximately two weeks earlier than Argentine varieties and are less likely to produce green seed. They are also more shatter-resistant than Argentine varieties and are, therefore, well suited to straight combining. ACS-C7 has fair resistance to blackleg; all other Polish varieties have poor resistance.

Three new synthetic Polish varieties are Early One, ACS-C29 and Synergy. All three varieties yield significantly more than their open-pollinated counterparts like AC Sunbeam. Early One and ACS-C29 are available through Mastin Seeds, while Synergy is available through SeCan.

Canola quality *Brassica juncea*

Brassica juncea canola is a new class of canola that is especially well adapted to areas where hot, dry conditions are common. It has very good resistance to blackleg and exhibits slightly better heat and drought tolerance than other canola. Juncea canola shattering resistance is similar to Polish canola and is well suited to straight-cut combining. All production is contracted.

XCEED VT Oasis CL, available from Viterra in 2012, is suited to the Brown and Dark Brown soil zones. It is compatible with the Clearfield Production System.

Canola information adapted, with permission, from "Varieties of Grain Crops 2012" published by the Saskatchewan Ministry of Agriculture